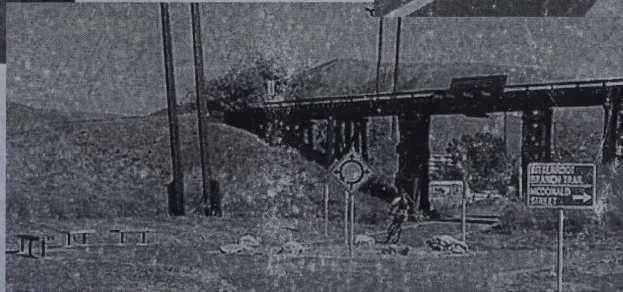
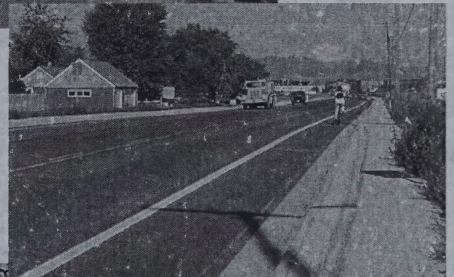
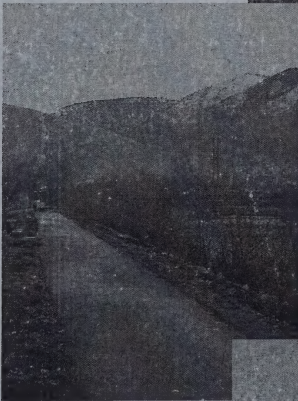


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Missoula Transportation

Plan Update

Technical Memorandum

Prepared by
Missoula Office of Planning and Grants

In cooperation with the
Montana Department of Transportation

and

Department of Transportation
Federal Highway Administration

Adopted September 21, 1999
Missoula Transportation Policy Coordinating Committee

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Plan Update
Technical Memorandum

Prepared by
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Missouri Department of Transportation

Department of Transportation
Federal Highway Administration

Missouri Transportation Policy Committee
Adopted September 11, 1991

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Executive Summary

The purpose of the 1999 Missoula Transportation Plan Update is to provide a progress report on the goals and recommendations from the 1996 Plan and to revise traffic volume and population data. Based upon the information in this Update, Missoula is making substantial progress on the recommendations made in 1996. Of the 23 road projects listed in Table 12-1, 14 are completed and 4 are in progress. There are 18 CMAQ projects listed that were not complete in 1996. Of these, 5 are done, and 9 are in progress. Table 12-3 lists 22 Other Major Network Improvement Projects, of which 2 are done and 5 are in progress. Of the 29 bicycle facility recommendations, at least 25 have been implemented in some way. Of the 15 pedestrian system recommendations, at least 10 have been implemented and work is being done on several others. Mountain Line had record levels of ridership in Fiscal Year 1999 and 8 of the 12 recommendations have been implemented.

There has been a 13% increase in Missoula County population since 1990, but annual growth has slowed in the late 1990s to approximately 1%. City population continues to grow at a faster rate than County growth, at a rate of 2.8% per year. This is a result both of new residents and the City's annexation of adjacent areas. Using updated figures for 1998, the projected population in 2005 is 96,200, compared to 101,500 in the 1996 Plan. Employment in 2005 is now projected as 56,700, compared to 66,200 in the 1996 Plan.

Traffic volumes have increased in many locations, as expected. There are some count stations where traffic has increased significantly faster than projected in the 1996 Plan. These are listed in Table 8-1. Traffic volumes on Brooks St. in 1994 were extremely high compared to years before and after. These were the volumes used in the 1996 Plan, so the revised numbers should be noted, as they are much lower than expected.

Transportation Demand Management (TDM) was just beginning when the 1996 Plan was written. Since then, Missoula in Motion, a consortium of agencies, has been formed and manages TDM in Missoula. The purpose of TDM is to achieve the 1996 Plan's goal of reducing projected vehicle miles traveled (VMT) by 5% within 5 years and 10% within 10 years. Between August 1997 and June 1999, two TDM programs reduced more than one million VMT. TDM is entering the first year of Phase II, and expects more significant results now that funding has been ensured and programs are getting established.

Another change since the 1996 Plan was written is TEA-21, the Transportation Equity Act for the 21st Century. The previous transportation funding act, ISTEA, expired in 1997. TEA-21 did not change the funding structure substantially, but added more flexibility. A detailed description of funding is in Chapter 11.

Missoula is still in non-attainment for carbon monoxide and particulate matter under 10 microns (PM₁₀). In 1999, Missoula additionally began monitoring for PM_{2.5}. Based upon previous studies, Missoula appears to be close to violating the annual average PM_{2.5} standard. Missoula is eligible and working toward re-designation as an attainment area. A conformity determination is being done to show that this Update will not adversely affect air quality.

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1.0 Introduction and Background

1.1 Project Background

Federal regulations require all urban areas in the United States to have a Transportation Plan, and that these plans be updated every five years for attainment areas and every three years for non-attainment areas. Missoula is non-attainment for carbon monoxide (CO) and particulate matter under 10 micrograms (PM₁₀). The Missoula Urban Area Transportation Plan was last updated in 1996, with a two-year process resulting in more than 200 pages of information.

The purpose of updating the plan every three years is, according to federal statutes, to confirm the transportation plan's "validity and its consistency with current and forecasted land use conditions and trends and to extend the forecast period." Thus, the 1999 Transportation Plan Update is in the form of a technical memorandum to the Montana Department of Transportation (MDT) and is a progress report on the 1996 Plan's goals and recommendations. Demographic and financial information was updated, while modeling was not done. The next full update, with modeling, will be done after the 2000 Census information is available.

Federal regulations state that the Metropolitan Planning Organization (MPO) is responsible for plans and programs which lead to the "development and operation of an integrated, intermodal transportation system that facilitates the efficient, economic movement of people and goods." Missoula's MPO is the Missoula Office of Planning and Grants. The Transportation Policy Coordinating Committee (TPCC) oversees transportation planning in the Missoula area, with guidance by the Transportation Technical Advisory Committee (TTAC). These committees consist of representatives from the City of Missoula, Missoula County, MDT, the Federal Highway Administration (FHWA), the Missoula Urban Transportation District (MUTD), the Missoula Ravalli Transportation Management Association (MR TMA), and other community organizations.

1.6 Public Involvement

The first step in the 1999 Update process was a series of meetings on these topics: non-motorized systems, transportation demand management (TDM), transit, roadway systems, and air quality/Comprehensive Plan. The public was invited to attend these meetings, and a mailing was sent to interested parties.

Two open houses were held in July after a draft of the Update was completed. A public hearing was held at the August meeting of TPCC. These events were publicized in local media, and mailings were sent to a list of approximately 150 people and agencies. TTAC and TPCC also reviewed the draft at their meetings, which are always publicized in the local newspaper as open to the public.

2.0 Roadway System Analysis

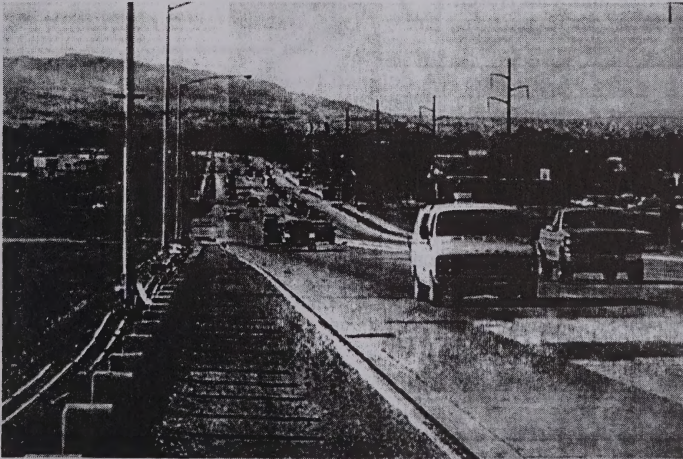
2.2 Traffic Volumes

Traffic volumes for motor vehicles are periodically monitored at 258 locations within the study area identified for the Transportation Plan Update. These short-term surveillance counts are collected by the Montana Department of Transportation (MDT), Missoula County, and the City of Missoula. The purpose of this extensive traffic counting program is to provide reliable data on historical traffic volumes and other pertinent characteristics. **FIGURE 2-8** shows the 1998 traffic volumes on major roads and streets in the Missoula Urban study area. **FIGURE 2-7** shows the 1994 traffic volumes, which are different than the numbers in Figure 2-3 from the 1996 Transportation Plan. Those volumes were arrived at after modeling, while the ones in this update are taken directly from traffic counts. In 1998, the highest volume of traffic in Missoula, 27,800 vehicles per day, occurred on Reserve St between South Ave and Central Ave.

2.3 Traffic Signal System Analysis

There are currently 57 traffic signals in the Missoula Urban Area. Twenty of these signals are included in one of five interconnected signal systems. The locations of existing signals and signal systems are shown in **FIGURE 2-9**.

A Level of Service study will be performed by MDT in Fall 1999 after completion of the Traffic Signal Operation Improvement project. This information will be added to this Update at that time.



2.4 Crash Analysis

As part of this Update, an investigation was conducted to identify recurrent crash locations in the Missoula Urban Area. Summaries of crash records for the road and street system were obtained from the Highway Information System (HIS) maintained by MDT. All motor vehicle crashes reported for the period January 1, 1996 through December 31, 1998 were reviewed for this analysis.

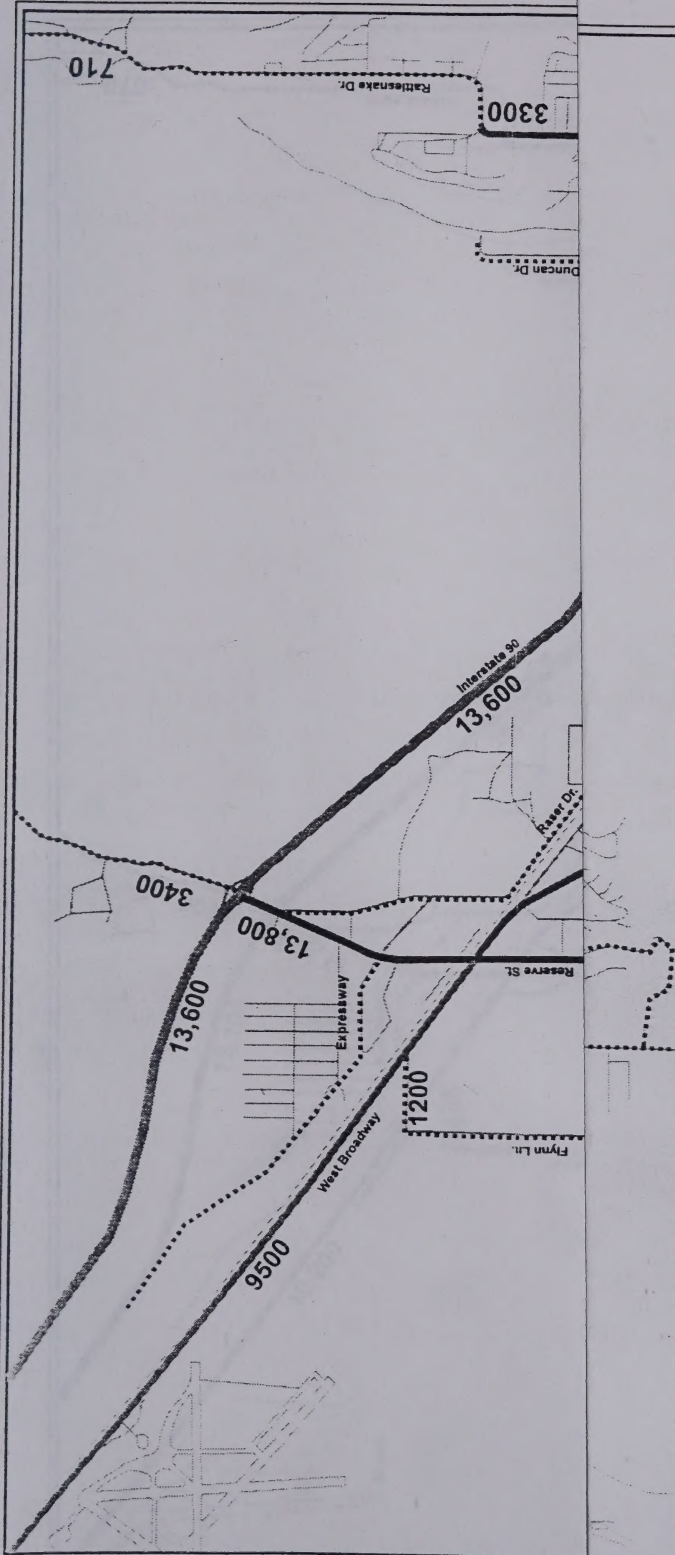
There were 12 fatalities as a result of vehicular crashes between 1996 and 1998. These are listed in the following table:

TABLE 2-3
Locations with Fatalities (1996-1998)

Location	Fatalities
Phillips/Burton	1
Broadway/California	1*
Spruce/Adams	1*
Grant Crk Rd/Old Quarry Rd	1
Grant Crk Rd/Old Grant Creek Rd	2
Ryman/Front/Main	1*
Van Buren/Willow/Lilac	1*
Madison/S 5th	1
Reserve/South	1
Reserve/Central	1
I-90 between Orange and Van Buren	1

* crash involved a pedestrian

Locations with High Crash Rates - A detailed review of the HIS accident data was performed to find locations where high numbers of accidents occurred during the three year study period. Printouts of the composite crash histories for intersections on the major street network were examined to identify problem areas. All locations with an average of 5 or more crashes per year were identified. Crashes were assigned values of one, two or five depending whether they resulted in property damage only, injuries, or fatalities, and a severity rating was calculated for each location. **TABLE 2-4** lists the locations where crashes occurred frequently. **FIGURE 2-10** graphically represents the locations of recurrent crashes in the Missoula Urban area.



Map - Not To Scale



Existing Traffic Volumes (1994)

LEGEND

- Interstate
- Principal Arterial
- Arterial
- Collector
- 13,200 Average Daily Traffic Volume

Figure 2-7
Existing Traffic Volumes
(1994)

2.4 Crash Analysis

As part of this Update, an investigation was conducted to identify recurrent crash locations in the Missoula Urban Area. Summaries of crash records for the road and street system were obtained from the Highway Information System (HIS) maintained by MDT. All motor vehicle crashes reported for the period January 1, 1996 through December 31, 1998 were reviewed for this analysis.

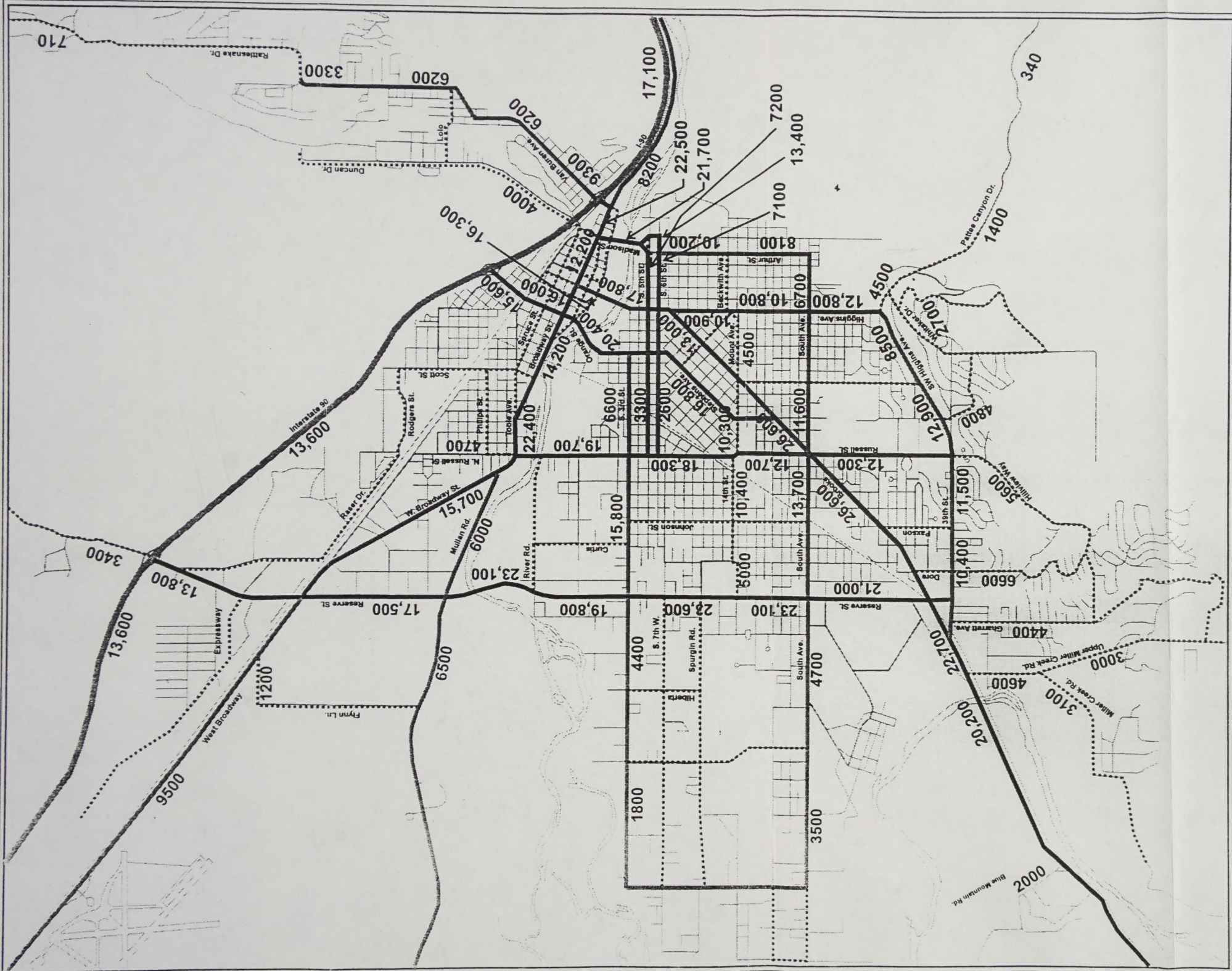
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Map - Not To Scale



MISSOULA

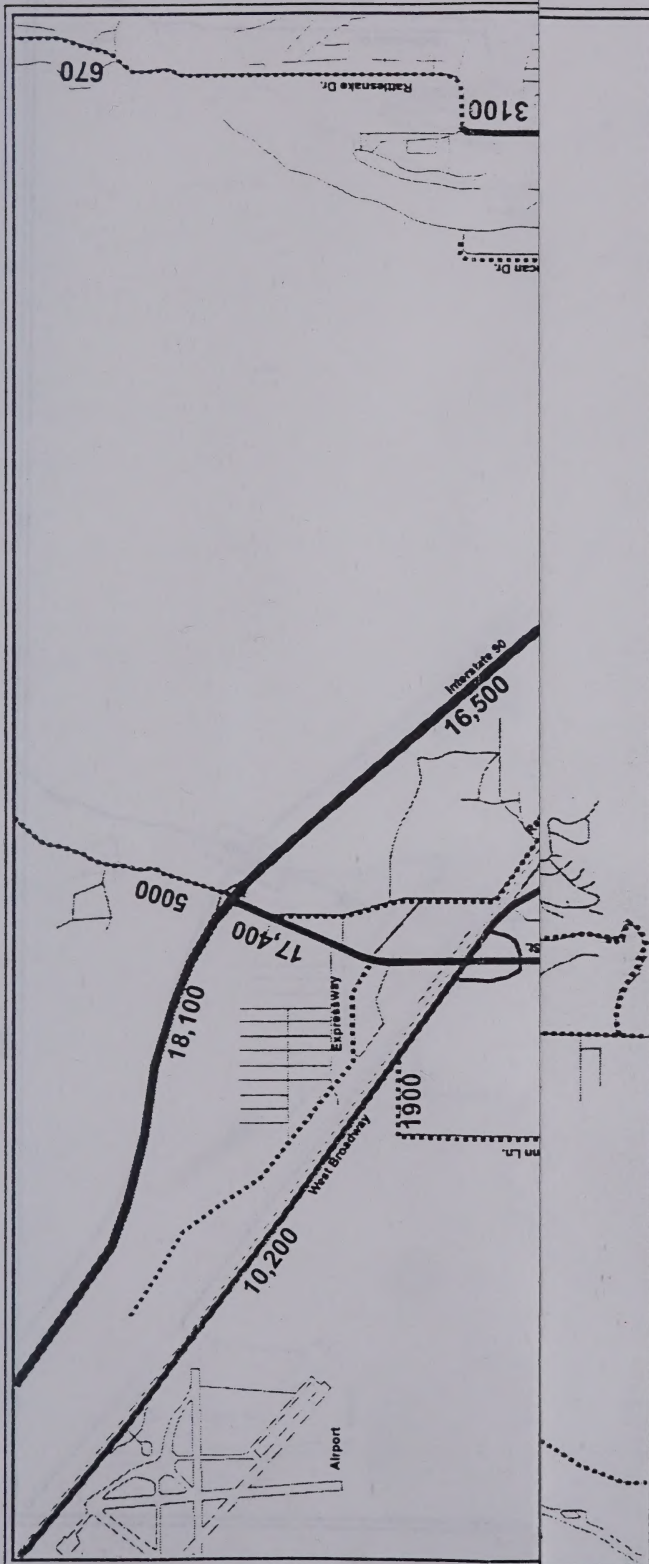
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PLAN UPDATE - 1999

Existing Traffic Volumes (1994)

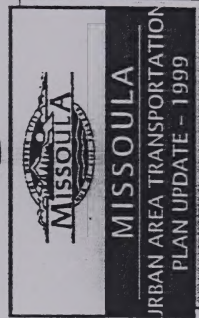
LEGEND

- Interstate
- Principal Arterial
- Arterial
- Collector
- 13,200 Average Daily Traffic Volume

Figure 2-7
Existing Traffic Volumes
(1994)



Map - Not To Scale

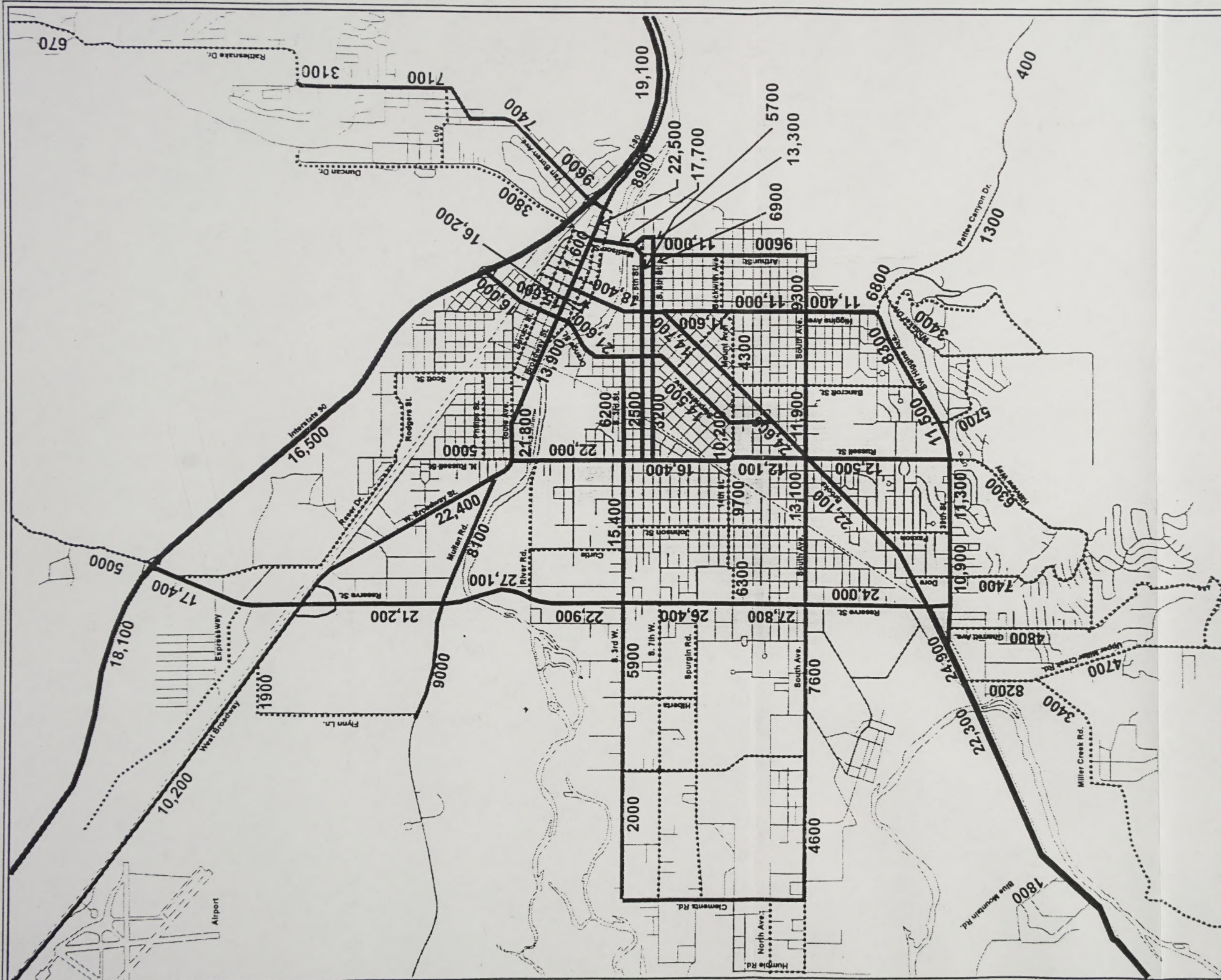


Existing Traffic Volumes (1998)

LEGEND

- Interstate
- Principal Arterial
- Arterial
- Collector
- 13,200 Average Daily Traffic Volume

Figure 2-8
Existing Traffic Volumes
(1998)



Existing Traffic Volumes (1998)

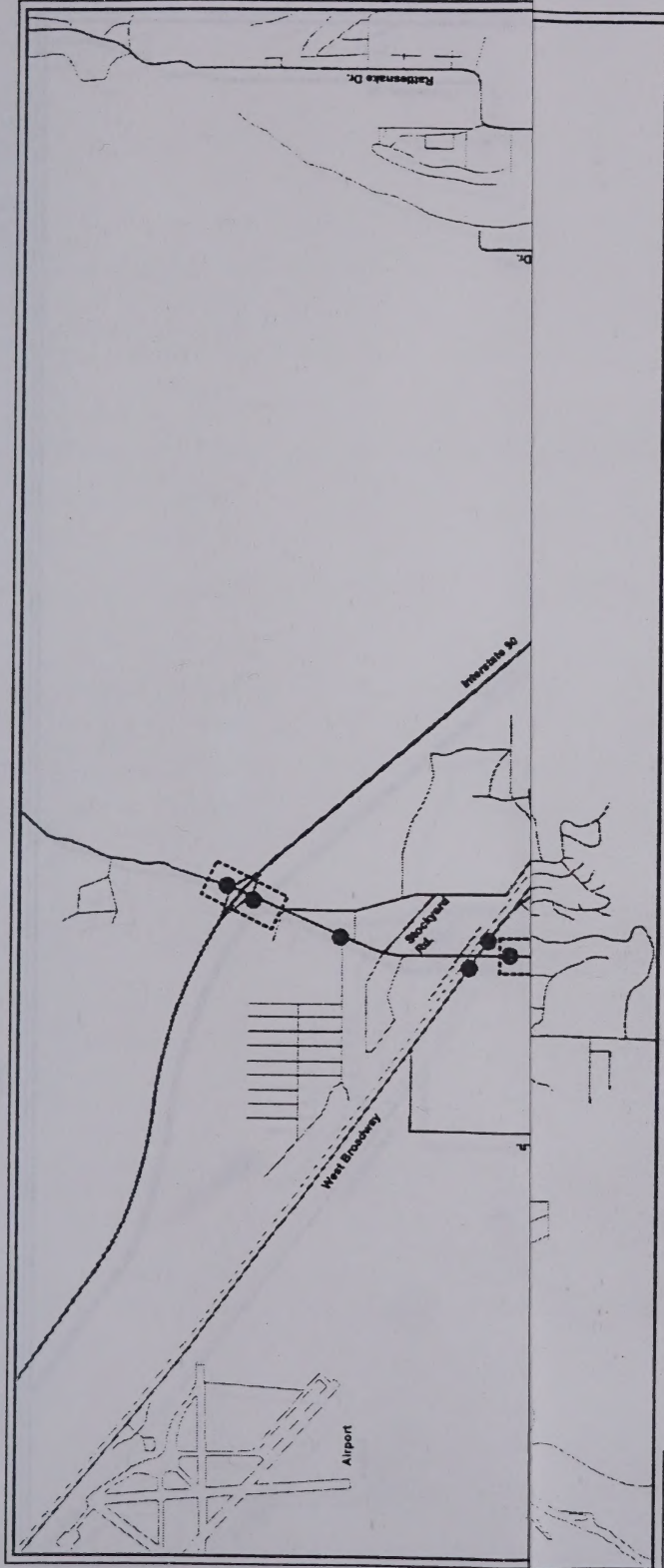
LEGEND

- Interstate
- Principal Arterial
- Arterial
- Collector
- 13,200 Average Daily Traffic Volume

Map - Not To Scale



Figure 2-8
Existing Traffic Volumes
(1998)



Existing Signals and Signal Systems

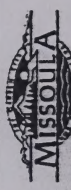
LEGEND

- Existing Signalized Intersections
- ▭ Current Interconnected Signal Systems
- ▭ Systems to be connected by 11/99

Note: Brooks/South/Russell cannot be coordinated with other intersections due to the number of phases required there.

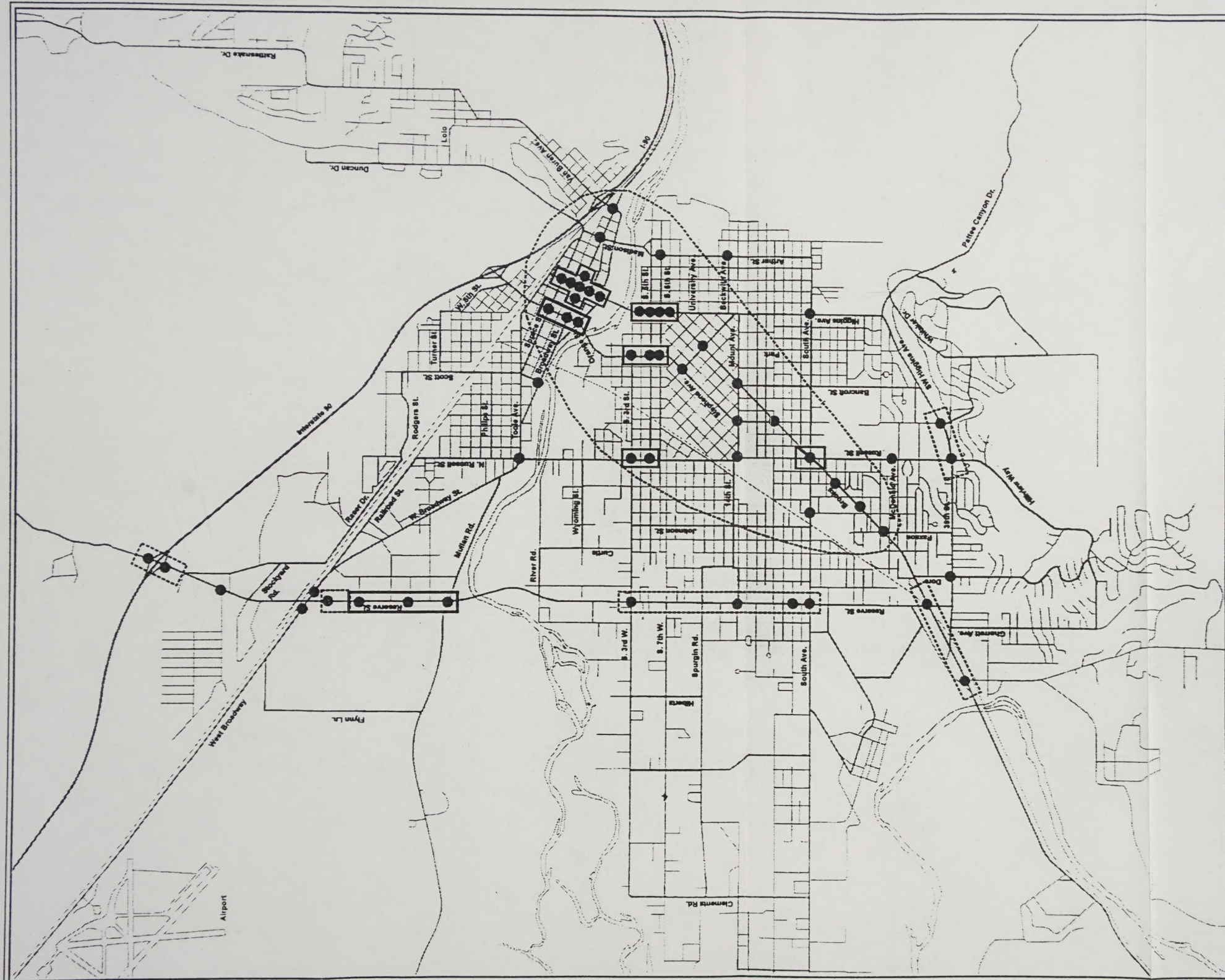
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Figure 2-9
Existing Signals and
Signal Systems



Existing Signals and Signal Systems

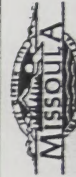
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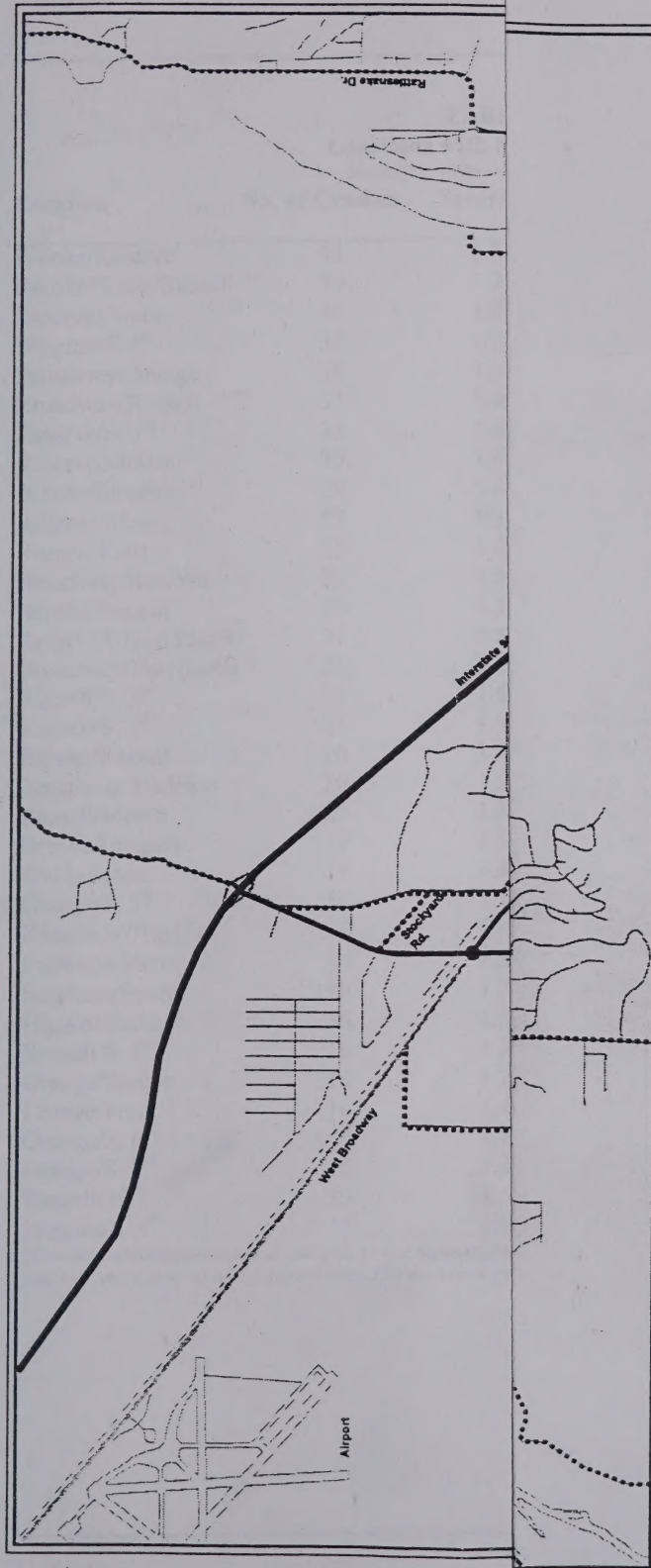




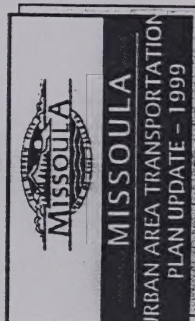
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Figure 2-9
Existing Signals and
Signal Systems



Map - Not To Scale

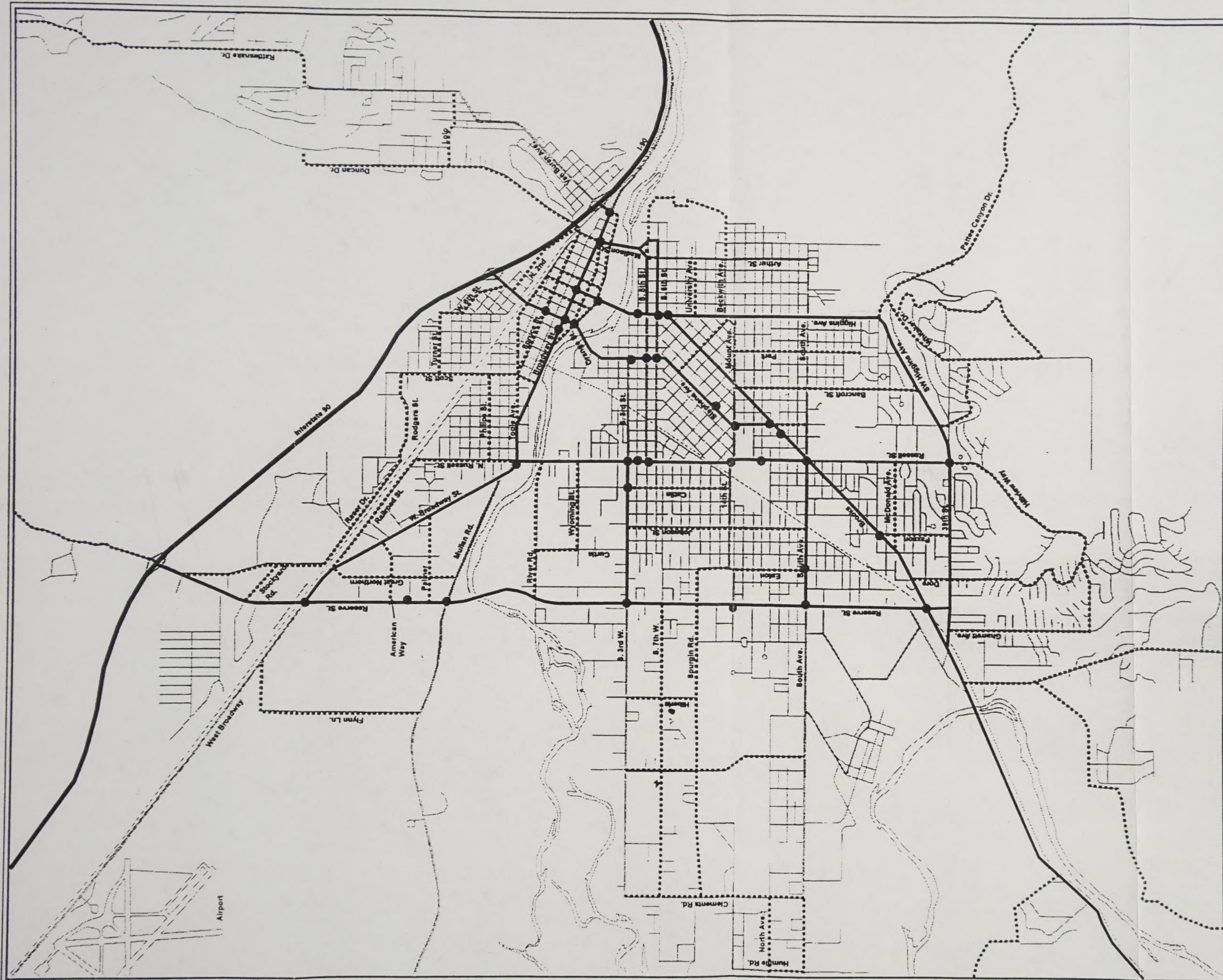


Crash Location Map

LEGEND

- Crash Location - 15 or More Crashes During 3 Year Period (1996 - 1998)
- Interstate
- - - Principal Arterial
- Arterial
- Collector

Figure 2-10
Crash Location Map



Map - Not To Scale



MISSOULA

URBAN AREA TRANSPORTATION

PLAN UPDATE - 1999

Crash Location Map

LEGEND

- Crash Location - 15 or More Crashes During 3 Year Period (1996 - 1998)
- Interstate
- Principal Arterial
- Arterial
- Collector

Figure 2-10
Crash Location Map

TABLE 2-4
Locations with High Crash Rates
 January 1, 1996 – December 31, 1998

Location	No. of Crashes	Severity*	Crashes per thousand vehicles	
			1996	1998
Brooks/Reserve	44	1.3	.08	.10
Brooks/South/Russell	40	1.2		.07
Reserve/South	40	1.8	.04	.10
Higgins/S. 6 th	37	1.2		.14
Broadway/Orange	36	1.5		.10
Broadway/Russell	33	1.6		.08
Reserve/S. 3 rd	33	1.6		.09
Reserve/Mullan	30	1.4	.06	.08
Brooks/Stephens	29	1.4		.08
Reserve/Mount	27	1.3		.07
Russell/Kent	25	1.4	.12	.17
Broadway/Reserve	25	1.3	.12	.06
Brooks/Paxson	25	1.3	.04	.09
Reserve/Union Pacific	21	1.5		.09
Broadway/Van Buren	21	1.1		.06
Russell/S. 3 rd	21	1.5	.04	.06
Russell/S. 4 th	21	1.5	.10	.09
Brooks/Regent	20	1.4	.12	.08
Broadway/Madison	20	1.5		.06
Russell/Mount	20	1.3		.08
Brooks/Higgins	19	1.5		.06
South/Eaton	18	1.4		.13
Orange/S. 5 th	17	1.1	.05	.08
Broadway/Higgins	17	1.4	.09	.06
Stephens/Mount	16	1.2		.07
Stephens/Strand	16	1.3	.08	.09
Higgins/Front	16	1.3		.05
Russell/S. 5 th	16	1.3	.06	.06
Orange/Spruce	16	1.2	.05	.05
Orange/Front	16	1.4		.05
Orange/S. 6 th	16	1.1	.06	.06
Orange/S. 3 rd	15	1.4		.06
Russell/39 th	15	1.5		.06
Higgins/S. 4 th	15	1.2	.06	.07

*Crashes were assigned values of one, two, or five depending on whether they resulted in property damage only, injuries, or fatalities, and a severity rating was calculated for each location.

3.0 Bicycle System Analysis

3.2 Current Activity

3.2.1 Employee Survey

More than 2,800 Missoula area employees completed the 1997 transportation survey, which is detailed in Chapter 10. Three percent of respondents reported that they commute by bicycle four or more days each week. Six percent of respondents commute by bicycle between one and three days a week.

3.2.2 Bicycle Counts

Missoula does not have reliable count information for bicycles. Bicycle counts were done in 1998 and 1999 at 4 intersections: Higgins/Front, Third/Orange, Beckwith/Arthur, and Eddy/Arthur. Higgins/Front was the only one of these intersections which was counted for the 1996 Update. Counts were done using volunteers with little training, and bicycle/pedestrian numbers are highly dependent upon weather. These, and other variables, make counts that are done only a few times a year unreliable. In order to have accurate information, counts should be done much more frequently by trained, paid staff at several locations. Another option would be to use video cameras and review the tapes at fast forward to count the number of bicycles.

The counts done in 1998 and 1999 were of single-occupancy vehicles, cars with 2 occupants, and cars with 3 or more occupants, bicycles, and pedestrians. The 1996 Plan used 8-hour counting periods, while the 1998 and 1999 are based on a 12-hour count period. The total mode share for bicyclists was 5% in the April 1998 count, 5.5% in the October 1998 count, and 3.5% in the April 1999 count.

Higgins/Front

DATE	4/96	4/98	10/98	4/99
BICYCLE COUNT	541*	827	804	591

**estimated—actual count was 361; this was multiplied by 1.5 to make it equal a 12-hour count period*

3.5 Recommendations

Program Recommendations

Each of the program recommendations outlined in the 1996 Update is listed, along with a brief description of progress made on implementation (in bold type). More detailed information is available in the document, "Progress Report and Recommendations for Action—Non-Motorized Transportation Plan and Non-Motorized Portions of the 1996 Missoula Transportation Plan Update." The Non-Motorized Transportation Steering Committee created this document after several meetings to discuss the status of each recommendation, and what future action needed to occur.



Bike lanes on W. Spruce near City Hall.

1. Develop a complete bikeway system consisting of networked routes, bike lanes and paths;

An on-street bikeway system is developed, with more than 16 miles of bike lanes and bike routes completed and approximately 300 bike lane/bike route signs installed. Off-street trails are being developed in the Bicycle Commuter Network with Phase I already completed and Phase II scheduled for construction Summer 1999. Phase III will complete North Ave to Livingston and Milwaukee R-O-W to the river.

2. Include bicycle facilities in plans for any new road improvement or development; Bike lanes were built into the new North Reserve Street project, are part of the Orange Street rebuild, and will be included in the rebuild of Stephens Ave, 39th/ SW Higgins/S. Higgins, S 3rd W, and South Ave W. Requirements for bike facilities are included in the new subdivision regulations. Bike racks are also required in all new developments.

3. Implement and adopt a non-motorized trail network for recreational bicycling and other activities;

The City is pursuing completion of the non-motorized system outlined in the Non-Motorized Transportation Plan. The Bicycle Commuter Network is in progress (see #1). Major off-street trails are being acquired, such as the Bitterroot Branch Trail, additions to the Riverfront Trail, and the Milwaukee Road Trail between Hickory and Russell streets. On a neighborhood scale, Peery Park Trail and West Rattlesnake Creek Trail involved many citizens and the Montana Conservation Corps. More detail can be found in the Non-Motorized Transportation Progress Report.



The junction of Milwaukee and Bitterroot Branch trails near McCormick Park.

4. Provide short-cuts for bicyclists wherever possible by developing paths beyond dead-end roads and across railroad tracks and other barriers;

The Northside pedestrian/bicycle overpass has been completed and the California Street Bridge is under construction and will be completed by Fall 1999. There are cul de sac requirements in the new subdivision regulations.

5. Discourage use of sidewalks as bike paths;
City ordinance prohibits bicycles on sidewalks in business districts; bicyclists under 15 may be on sidewalks outside business districts.

6. Design or redesign arterials and collectors to accommodate bicycles; where existing arterials cannot safely accommodate bicyclists and improvements would be cost-prohibitive, adjacent streets should be identified and marked as bicycle routes;

See #2.

7. Begin a bike route signing program;

See #1.

8. Provide adequate facilities for bicycle parking at public buildings and retail areas;
Bicycle parking is required in all new developments. The City has a bike rack program, which pays half the cost of the rack for businesses, and the full cost for non-profit and governmental organizations. In 1994, 50 racks were installed, 47 in 1995, 41 in 1996, 45 in 1997, and 85 in 1998. The University of Montana has also installed many racks since the 1996 Update, with space for a total of 4800 bicycles.

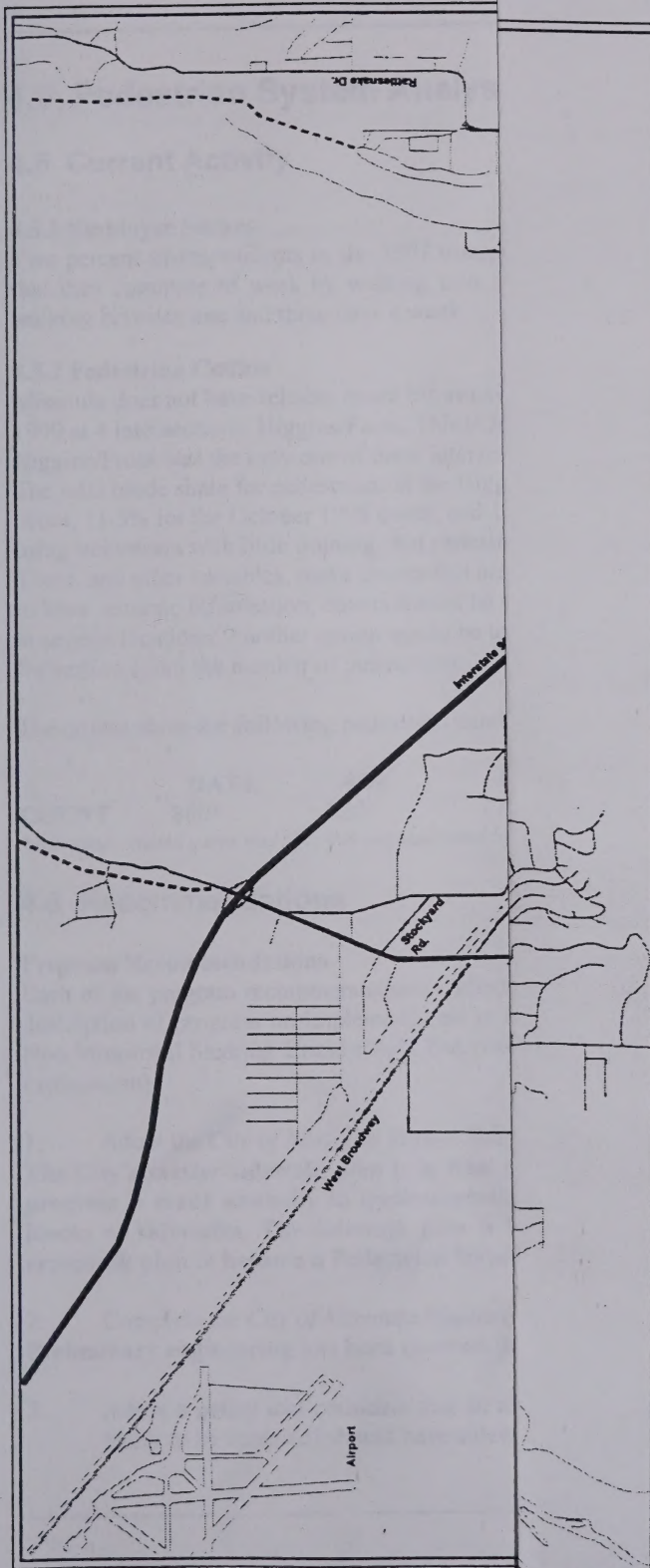
9. Ensure that new commercial developments, apartment complexes and employers provide bicycle parking facilities through the site review process or a zoning ordinance;

This is included in the new zoning regulations, which have not yet been formally adopted.

10. Install and lease up to ten bike lockers at major destinations in Missoula;
There are 8 bike lockers in the downtown parking garage.

11. Ensure that all bicycle facilities are inspected and maintained on a regular basis;
The University of Montana maintains their bicycle facilities on an annual basis. The Parks and Recreation Department maintain trails. The City sweeps streets, including bicycle lanes.
12. All bicycle traffic control signs, pavement markings and signals should conform to the *Manual on Uniform Traffic Control Devices (MUTCD)*;
This is standard procedure.
13. Continue a public relations program encouraging alternatives to automobile travel and reminding road users that streets are for everyone;
The City held "Try a Better Way day" monthly for 3 years. Bike Walk Bus Week has been held annually for 8 years, with more than 4,000 participants, 50 sponsors, and 60 events in 1999. Periodic press releases were sent to media by several agencies, including the Bicycle/Pedestrian Office and the Health Department. A "Share the Road" program was implemented, with the goal to have 10,000 Missoula residents sign a pledge card to share the road. This program is 50% complete. More information will be included in the Non-Motorized Plan Update.
14. Review the need to adjust signal timing at problem intersections for safe bicycle crossings;
In the current areawide signal project, the timing and phasing of all traffic signals will be evaluated for traffic, including bicycles.
15. Demand-actuated signals should respond to the presence of bicycles;
The signal project includes bicycle detector loops at all signalized intersections.
16. Install Stop or Yield signs for motor vehicles on low-volume residential streets that intersect with bicycle routes in order to reduce the number of uncontrolled intersections where bicycling is common;
When the bike lane/network project is complete, the need for this will be evaluated. An example of this is on Phase One of the Bitterroot Branch Trail. Stops or yields will be installed when an engineering study demonstrates they are warranted.
17. Increase sight distance at bicycle crossings by signing and striping no parking zones within 50 feet of any intersection;
Sight distance regulations are in place at specific intersections if they are stop-controlled or un-controlled, and depending on speed. This will be determined on an individual basis.
18. Mark shoulder lines on rural roads wherever feasible (based on 12-foot travel lanes); where shoulders are four feet wide or greater, consider marking them as bike lanes;
Striped roads are added routinely.
19. Re-stripe four-lane arterial streets to provide wider curb lanes, if no designated bike lanes, as part of any new overlay or improvement project;
See #2.

20. Provide appropriate signing and pavement markings where bike lanes are established;
See #7.
21. Ensure that the needs of bicyclists are considered in new developments;
The new subdivision regulations ensure that bicyclists' needs are considered. Resulting recommendations, however, are not always implemented.
22. Continue to implement safety education programs in elementary schools;
A bicycle and pedestrian safety program is established in the physical education curriculum for grade K-5 in all Missoula School District 1 elementary schools. Other programs are provided to targeted schools and groups on request.
23. Work with the University to provide new student orientation on bicycle safety; enlist an Effective Cycling Instructor to teach at least one course on safe cycling skills;
UM's Campus Security provides bicycle safety information as part of orientation.
24. Update the Missoula Bike Map on a continuous basis to include new bicycle routes and facilities; make current copies of this map available at all bike shops and public buildings;
The updated map was released in August 1999.
25. Implement a comprehensive law enforcement program to protect the rights and enforce the responsibilities of all road users;
Authority for implementing this needs to come from City Council. Transportation planning staff will follow up through the 2000-2001 work year.
26. Continue supporting the use of police officers on bikes for both regular patrol and bicycle traffic law enforcement;
The City has three officers trained to use bicycles on the job. The Sheriff is beginning a bicycle patrol program. The University has 2 bicycle officers and is training 1 more.
27. Increase awareness about the rights and responsibilities of bicyclists using techniques such as PSAs, brochures inserted in drivers manuals, signs on roadways and involvement in driver's education classes;
PSAs and press releases are occasionally used. A more focused campaign will begin in Fall 1999 after the bicycle lanes project is completed.
28. Advertise the availability of bike racks on public transit buses;
All buses are equipped with bike racks.
29. Consider using visionary goals and new approaches to capture media and public attention for the purpose of furthering the goals of the Transportation Plan.
Many organizations work on public education and outreach, such as the Office of Planning and Grants, the Health Department, the Missoula Ravalli Transportation Management Association, Missoula in Motion, and more. Further detail will be provided in the Non-Motorized Update.



Map - Not To Scale Existing and Planned Bicycle and Pedestrian Facilities

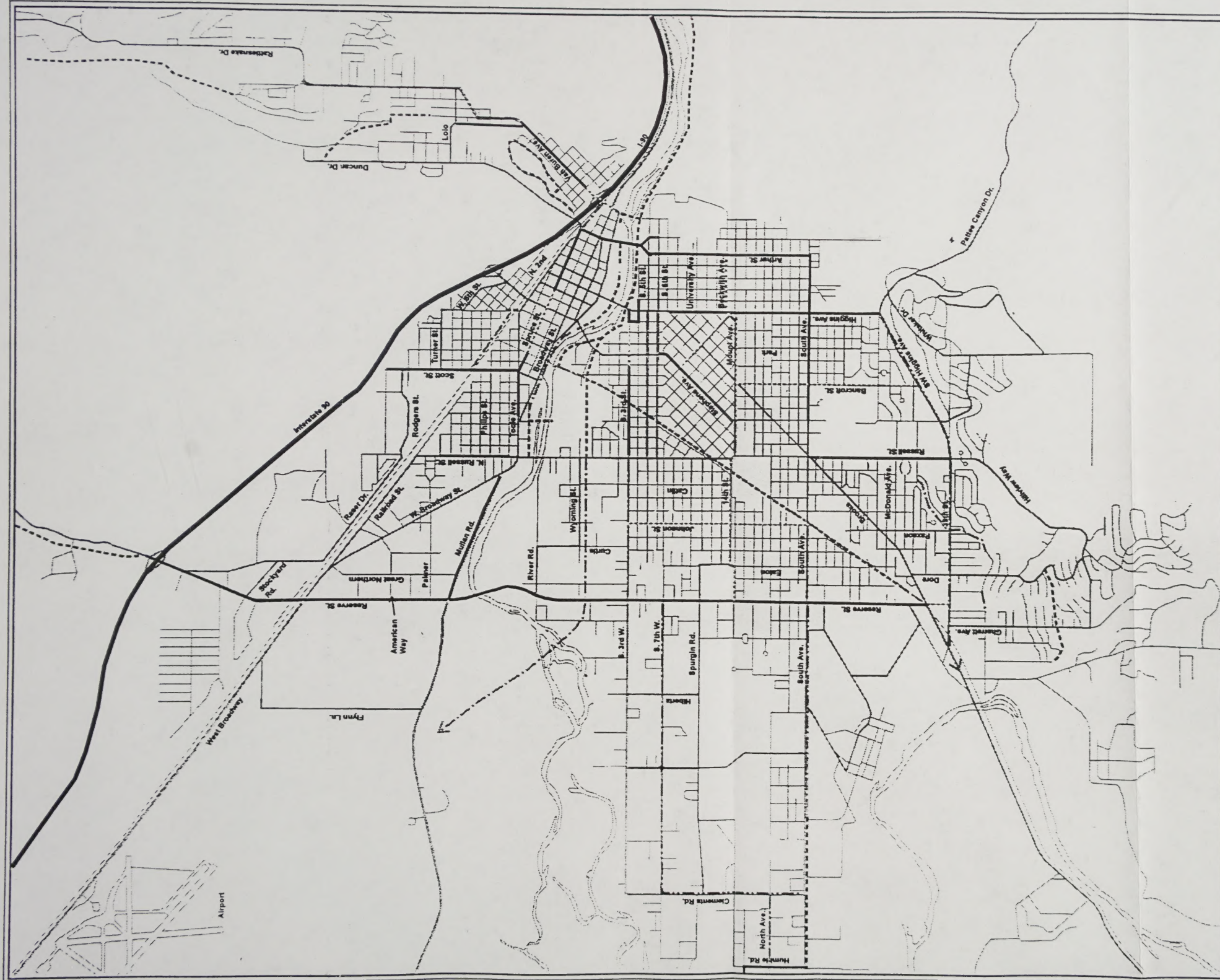


LEGEND

- Bicycle Lanes (Existing)
- - - Bicycle Lanes (Planned)
- ... Bicycle Routes
- . - Trails (Existing)
- . . Trails (Planned)



Figure 3-6
Bike/Pedestrian Facilities



Map - Not To Scale

Existing and Planned Bicycle and Pedestrian Facilities



LEGEND

- Bicycle Lanes (Existing)
- - - Bicycle Lanes (Planned)
- Bicycle Routes
- - - Trails (Existing)
- - - Trails (Planned)



MISSOULA

URBAN AREA TRANSPORTATION
PLAN UPDATE - 1999

Figure 3-6
Bike/Pedestrian Facilities

4.0 Pedestrian System Analysis

4.5 Current Activity

4.5.1 Employee Survey

Two percent of respondents in the 1997 transportation survey, detailed in Chapter 10, reported that they commute to work by walking four or more days a week. Four percent commute by walking between one and three days a week.

4.5.2 Pedestrian Counts

Missoula does not have reliable count information for pedestrians. Counts were done in 1998 and 1999 at 4 intersections: Higgins/Front, Third/Orange, Beckwith/Arthur, and Eddy/Arthur. Higgins/Front was the only one of these intersections which was counted for the 1996 Update. The total mode share for pedestrians at the Higgins/Front locations was 5.5% for the April 1998 count, 11.5% for the October 1998 count, and 10% for the April 1999 count. Counts were done using volunteers with little training, and pedestrian numbers are highly dependent upon weather. These, and other variables, make counts that are done only a few times a year unreliable. In order to have accurate information, counts should be done much more frequently by trained, paid staff at several locations. Another option would be to use video cameras and review the tapes at fast forward to count the number of pedestrians.

The counts show the following pedestrian numbers for the Higgins/Front location:

	DATE	4/96	4/98	10/98	4/99
COUNT	880*	820	1774	1675	

*estimated—actual count was 587; this was multiplied by 1.5 to make it equal a 12-hour count period

4.6 Recommendations

Program Recommendations

Each of the program recommendations outlined in the 1996 Update is listed, along with a brief description of progress on implementation in bold type. For more detailed information, see the Non-Motorized Steering Committee's Progress Report (see Section 3.5 of this document for an explanation).

1. Adopt the *City of Missoula Master Sidewalk Plan*.
The City's master sidewalk plan is in final draft; adoption has been proposed. Substantial progress is made annually in implementation. In 1998, the City replaced or installed 200 blocks of sidewalks. The sidewalk plan is being updated in 1999 and will incorporate a crosswalk plan to become a Pedestrian Improvement Program.
2. Complete the *City of Missoula Master Sidewalk Plan* Priority Area One;
Preliminary engineering has been done on the infill project.
3. Adopt a policy that considers that all residential streets within the city limits (or in areas likely to be annexed) should have sidewalks on both sides;

New subdivision regulations include this requirement. Within current city development, the policy is to require installation of sidewalks whenever the property owner applies for a building permit or any variance.

4. Comply with requirements included in the Americans With Disabilities Act (ADA); **Formal commitment is made to this in the comprehensive plan and the subdivision regulations. The latest requirements are adopted and implemented in all city sidewalk projects. The City has initiated enforcement of on-site exterior access requirements for commercial and multi-family development.**

5. Provide marked crosswalks where the following conditions exist:

- signalized locations (intersections and mid-block)
- school zones and recommended walking routes to schools
- intersections where the legally-defined unmarked crosswalk is deemed less safe than an alternative location, to minimize crossing distance and reduce the time that pedestrians are in the street, and to provide better sight distance between pedestrians and motorists, or other safety considerations
- mid-block locations where a legal crosswalk is desirable for protection of pedestrians

The City is developing a master crosswalk plan, which will be incorporated into the City's Pedestrian Improvement Program.

6. Consider special surfacing and/or raised crosswalks at high volume pedestrian locations; **These are considered by planners and engineers. Funding and maintenance are often the reasons for not implementing. A demonstration project would be useful in the near future.**

7. Explore the use of curb bulbs at intersections with high pedestrian volumes; **These are installed in some locations. They are also used in conjunction with traffic calming projects when appropriate. The City has budgeted for more bulbs in the Central Business District, and bulbs are planned in the Stephens project (Spring 2000).**

8. Consider the impacts that free right turns and other roadway capacity-enhancing projects may have on pedestrian safety and convenience during the planning process; **A free right turn planned for the north end of the Orange Street Bridge was rejected for reasons of pedestrian safety and cost. Others, when considered, are examined for possible pedestrian buttons.**

9. Consider providing exclusive all-way walk signal phases in several key locations; **This has not been deemed necessary at this point.**

10. Install crosswalk warning beacons where additional warning is deemed necessary;
See #5

11. Consider roadway designs and appropriate traffic calming in combination with other improvements to manage speeds along sections of arterials that are commercial/pedestrian oriented;

Medians are being installed on Stephens in Spring 2000. The City operates a traffic calming program, which is based on applications from neighborhoods.

12. Develop and implement a Recommended Routes to School Program with cooperation of all school districts;

The City has communicated with school administrators, physical education teachers, and PTAs regarding a Safe Ways to School program. A survey was distributed by PTAs to all parents at 5 schools. One of the elemental goals of the Pedestrian Improvement Program is to address school issues through City projects.

13. Develop a linked system of multi-use trails and foot paths on abandoned railroad grades, and along streams, rivers or other natural corridors that provide a pleasant walking experience;

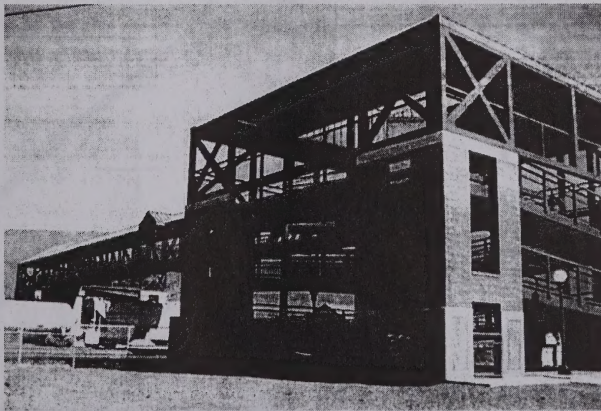
See Chapter 3, # 3

14. Increase public awareness about the rights and responsibilities of pedestrians through a media campaign followed by a strong enforcement program;

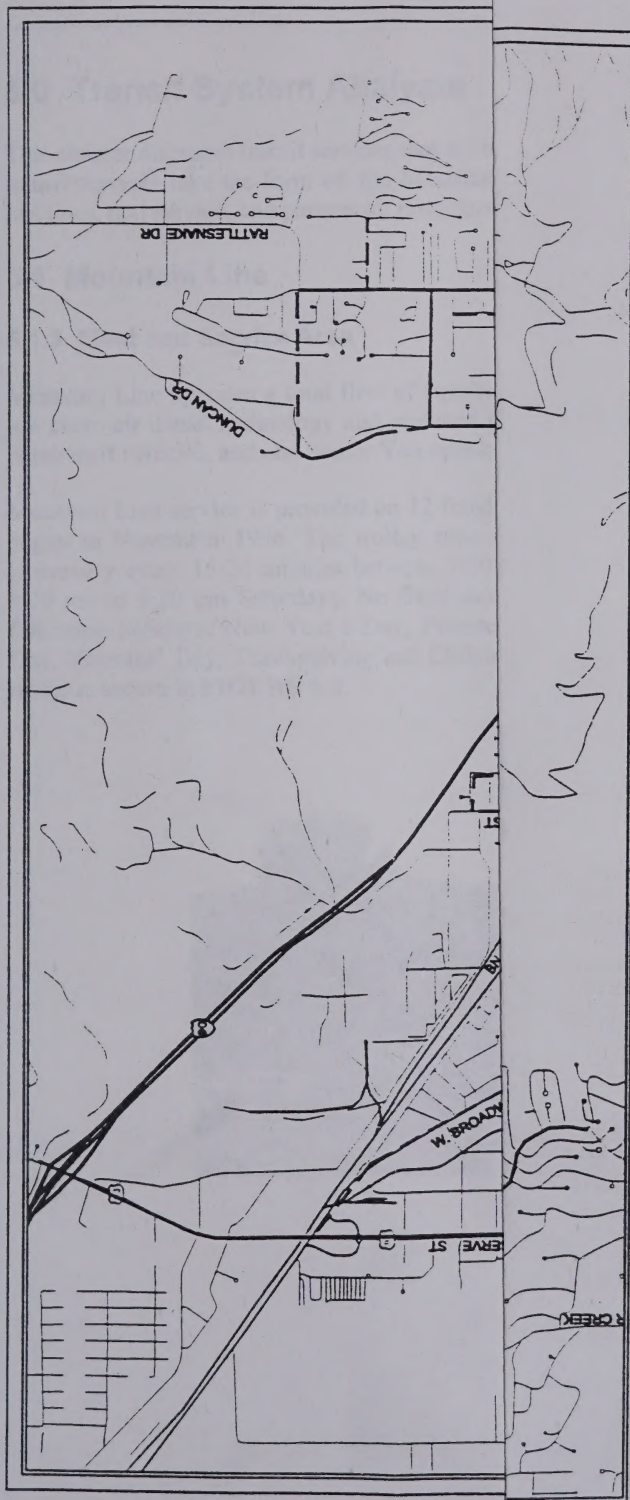
Press releases are used to remind citizens of pedestrians' needs, and to remind pedestrians of ways to be safer.

15. Install signs on multi-use paths indicating mixed use and advising pedestrians to keep right.

Nothing has been done on this issue.



The Northside Crossing makes it easier for pedestrians and bicyclists to travel between the Northside and the rest of Missoula.

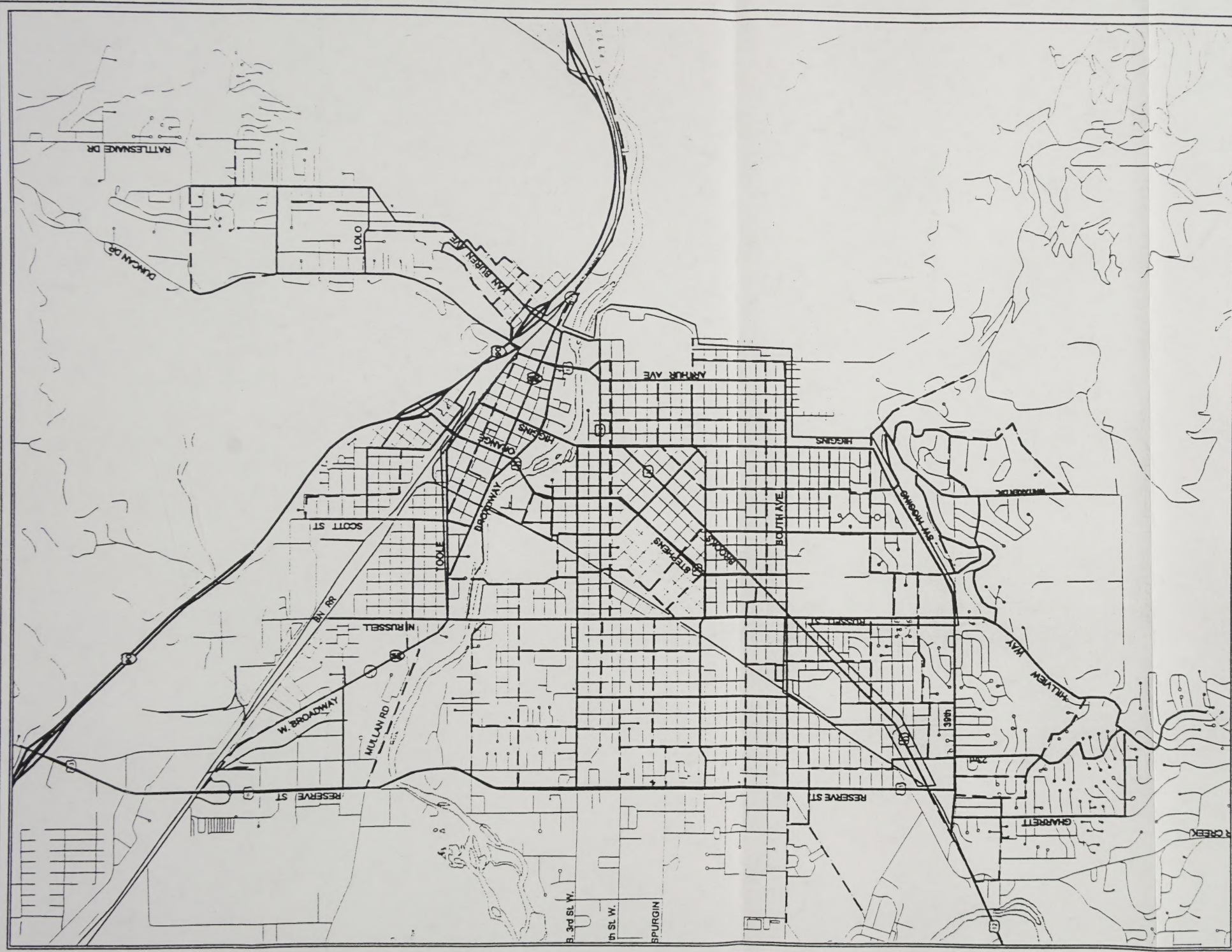


Master Sidewalk Plan

LEGEND

- Primary Sidewalk Network
- - - Secondary Sidewalk Network
- Priority Area One

Figure 4-6
Master Sidewalk Plan



Master Sidewalk Plan

LEGEND

- Primary Sidewalk Network
- - - Secondary Sidewalk Network
- Priority Area One

Figure 4-6
Master Sidewalk Plan

5.0 Transit System Analysis

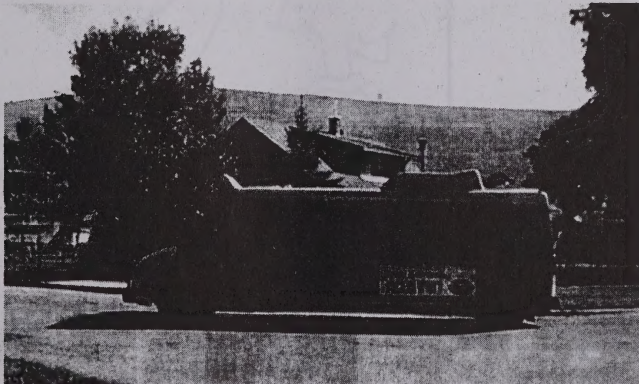
This chapter discusses transit services that are available to the public in the Missoula area. These transit services take the form of: the Mountain Line bus system, public school buses, regional bus lines, taxi service, and paratransit providers.

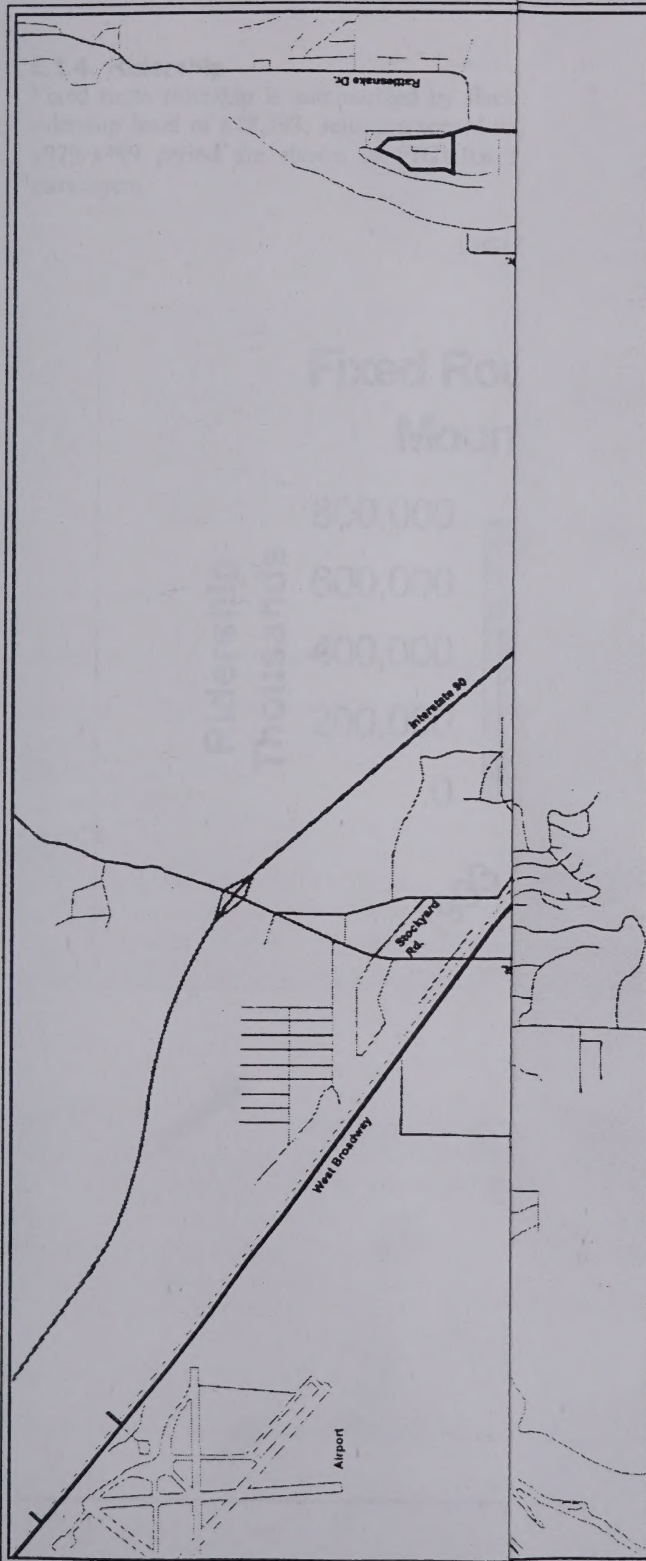
5.1 Mountain Line

5.1.3 Fleet and Service Area

Mountain Line operates a total fleet of twenty-eight vehicles, including eight new buses which use clean-air diesel technology and replaced part of the fleet. Twenty fixed-route buses, three paratransit vehicles, and one Senior Van operate during weekday peak hours.

Mountain Line service is provided on 12 fixed routes, including a Downtown Circulator Trolley, begun in November 1996. The trolley runs in the downtown area and also connects to the University every 15-20 minutes between 7:20 a.m. and 6:20 p.m. Monday through Friday and 8:20 am to 5:20 pm Saturdays. No fixed-route transit service is provided on Sundays or the following holidays: New Year's Day, President's Day, Memorial Day, Fourth of July, Labor Day, Veterans' Day, Thanksgiving and Christmas. An updated map of all Mountain Line fixed routes is shown in **FIGURE 5-4**.





Map - Not To Scale

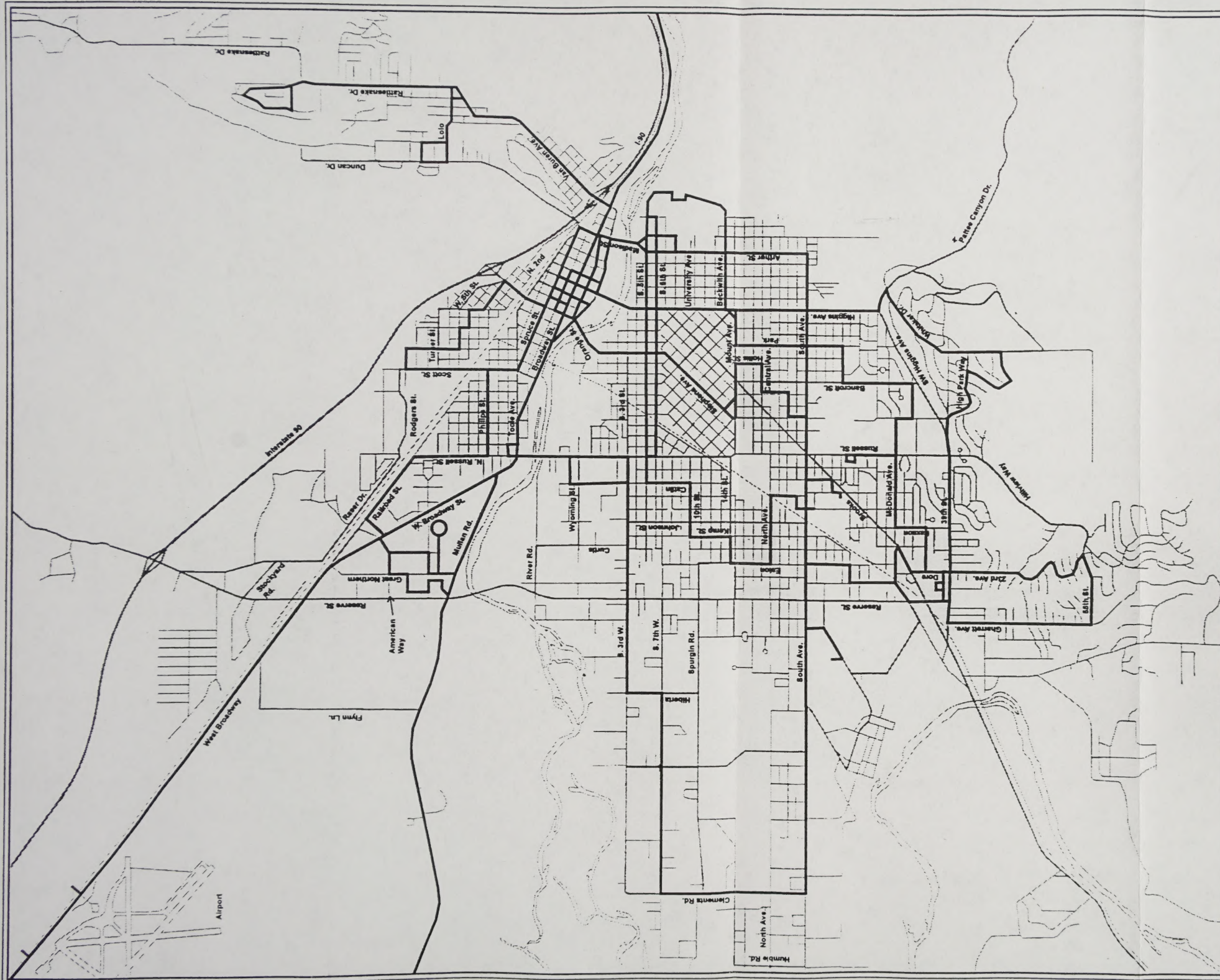


Transit Service Area

LEGEND

— Bus Route

Figure 5-4
Transit Service Area



Map - Not To Scale



Transit Service Area

LEGEND

— Bus Route



Figure 5-4
Transit Service Area

5.1.4 Ridership

Fixed route ridership is summarized by fiscal year in **FIGURE 5-5**. Fiscal year 1999 had a ridership level of 678,393, setting a record high for Mountain Line. Monthly averages for the 1979-1999 period are shown in **FIGURE 5-6**, showing seasonal variation in numbers of passengers.

FIGURE 5-5

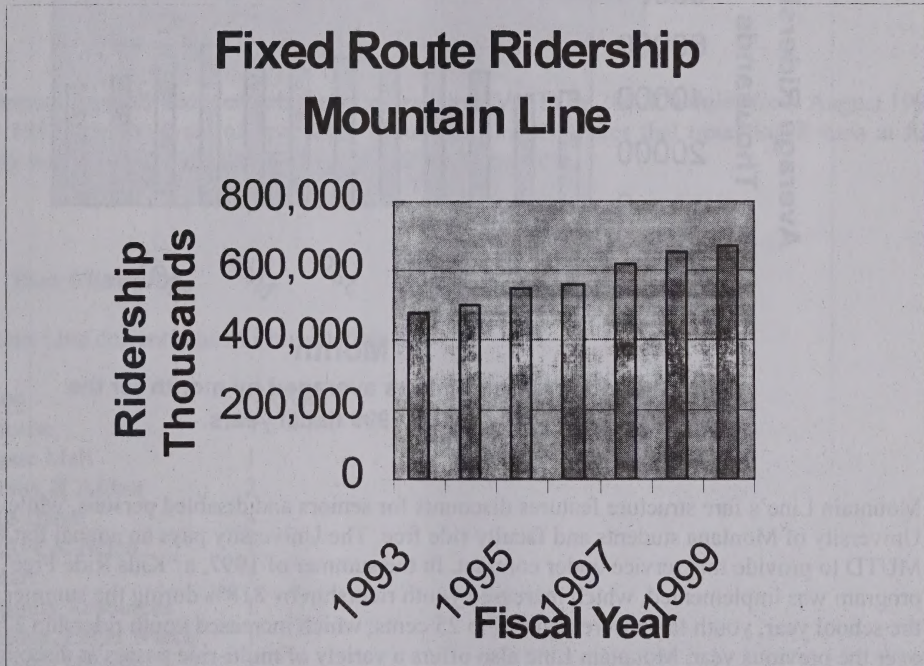
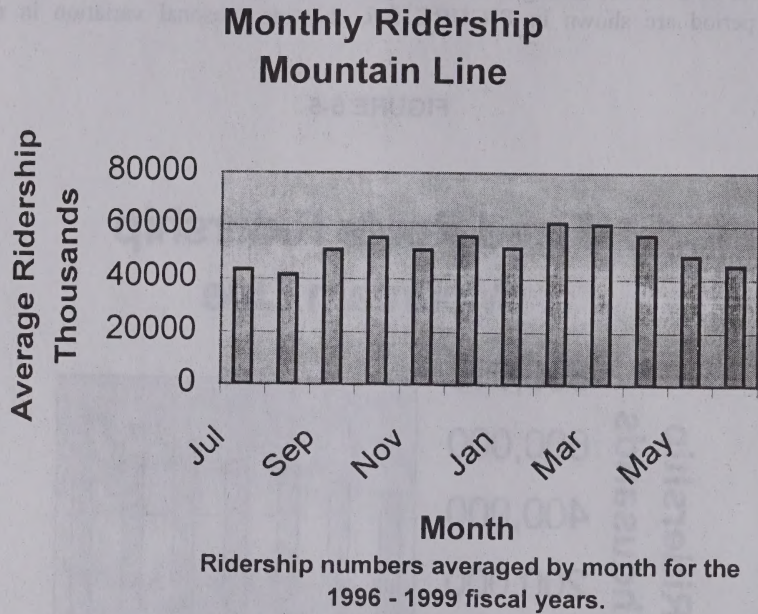


FIGURE 5-6



Mountain Line's fare structure features discounts for seniors and disabled persons, while University of Montana students and faculty ride free. The University pays an annual flat fee to MUTD to provide this service under contract. In the summer of 1997, a "Kids Ride Free" program was implemented, which increased youth ridership by 818% during the summer. During the school year, youth fares were reduced to 25 cents, which increased youth ridership 375% over the previous year. Mountain Line also offers a variety of multi-ride passes at discounted rates.

5.1.7 Vanpools

Mountain Line assumed overall responsibility for vanpool operations, which are still coordinated by Missoula Ravalli Transportation Management Association, between Ravalli and Missoula counties in February 1999. Four vanpools are currently in operation with two additional vanpools planned during 2000 and two more in 2001.



The vanpool program reduced vehicle miles traveled (VMT) by 200,800 miles from August 1997 – July 1998, the first year of operation. Mountain Line estimates that operating 8 vans at full capacity will result in a reduction of 1,622,400 VMT per year.

5.1.8 Bus Shelters

Mountain Line currently has 15 bus shelters:

<u>Location</u>	<u>Shelters</u>
Courthouse	3
Southgate Mall	1
University & Arthur	2
Campus Drive	4
South Ave & Helen	1
Wal-Mart	1
Opportunity Resources	1
The Bridge, Eagle Watch	1
Community Hospital	1

There are 8 proposed shelters:

- K-Mart
- Travois Village
- Van Buren & Broadway
- Big Sky High School
- Sentinel High School/Vo-Tech
- Vo-Tech West
- Dornblaser Park & Ride
- Arthur & Evans

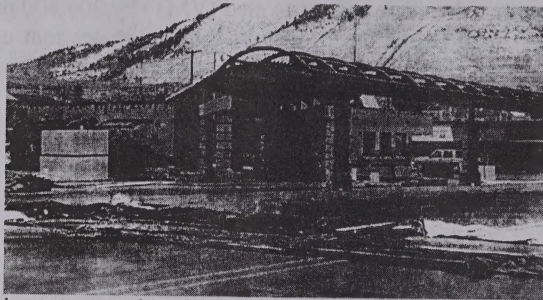
5.1.9 Trolley

Mountain Line, in partnership with the Missoula Redevelopment Agency and the Missoula

Parking Commission, purchased a trolley replica bus and began operation in December 1997. The trolley circulates between the downtown and the University of Montana every 20 minutes.

5.1.10 Transfer Center

Mountain Line initiated assessment of the feasibility of developing a transfer center in September 1996. This study was conducted in two phases. Phase I looked at existing conditions and a review of alternatives, including a no-build scenario. Phase II focused on site selection and development of an implementation plan. The feasibility study was completed in May 1997, and an Environmental Assessment was completed in January 1998, following approval by the MUTD Board. Construction is underway, with an anticipated completion date of March 31, 2000.



The downtown transfer center is expected to be completed in Spring 2000.

5.3 Regional Bus Lines

Missoula is still served by three regional public bus lines which operate out of a single terminal located at 1660 West Broadway. Greyhound Bus Lines and Rimrock Trailways provide both passenger and freight service to Missoula on a daily basis. Between the two carriers, an estimated fifty passengers originate and depart from Missoula, and an approximately equal number terminate their trip at the Broadway terminal. These numbers increase significantly in the summer.

Greyhound runs three eastbound and three westbound buses each day through the Missoula terminal, and adds a fourth express service schedule during the summers. Greyhound buses travel I-90 through Montana and interstate corridors nationwide. Connections to the east include Butte, Billings, and points beyond as far as Maine. To the west, connections include Coeur d'Alene, Spokane, and points beyond, with routes extending to Seattle and California.

Rimrock Trailways runs one bus each way daily between Missoula and Whitefish, where passengers can make connections with Amtrack passenger rail service across northern Montana. In addition, one bus travels each way daily between Missoula and Helena. Finally, 1 bus travels each way daily between Missoula and Great Falls. A loop bus between Missoula and Spokane will be added for the summer travel season.

C.A.R.T., Inc. operates a bus route between Salmon, Idaho and Polson, Montana with stops in Darby, Hamilton, and Missoula. The bus runs twice a day on Tuesdays, Wednesdays, and Fridays. For more information and a complete schedule, call C.A.R.T. at 1-800-258-4937.

Private bus service is available through Beach Transportation and L&B Busing.

5.4 Taxi Service

Yellow Cab, Inc., privately owned and operated by Bob Gray, provides taxi service in Missoula and the surrounding area. The company has a fleet of 5 taxi cabs (3 standard sedans, 1 minivan, and 1 Suburban) and 10 drivers, but runs a maximum of 3 cabs at a time. The company provides call-in service 24 hours a day, seven days a week, with coverage extending for a 50-mile radius around Missoula.

5.5 Paratransit Services

Special transit services (STS) were implemented by Mountain Line in fiscal year 1989. These operations consist of a paratransit service for ADA eligible passengers, and a Senior Van service for passengers over sixty. The special transit fleet consists of three paratransit buses and one van, carrying an average of 1,300 passengers per month. Clientele-specific transportation services are also provided by Opportunity Resources, Inc; Eagle Watch Estates; and Missoula Development Service Corporation. Additionally, three senior/retirement communities in Missoula offer special transportation to residents: Grizzly Peak, Hunter's Glen, and the Village Senior Residence.

The Missoula Community Medical Center operates a bus capable of carrying three people in wheelchairs and four ambulatory riders. This bus operates between the hours of 8:00 am and 4:30 pm within an eight-mile radius of the Medical Center. The service is provided at no charge to patients participating in rehabilitation programs, as well as to patients with disabilities who have been referred for treatment. The service is door-to-door, picking each patient up at their home, bringing them to the Medical Center, and returning them home when their treatment is completed.

5.8 Transit System Recommendations

5.8.3 Mountain Line System Recommendations

The following recommendations were made for Mountain Line in the 1996 Transportation Plan Update, with progress reported in bold:

1. The University of Montana contract for bus services should be expanded and used as a model for other employers.

The University is experiencing a lack of funding and is not able to provide adequate funding for current levels of service. It is not likely that the contract can be expanded in the near future. Mountain Line has explored options with other major employers. The City is

planning to use this model by providing free bus passes for all employees.

2. Other opportunities exist for expanded ridership through special promotions such as summer youth passes and "Clean Commute" days.

Mountain Line, in partnership with the City of Missoula, succeeded in obtaining a grant from the International Council for Local Environmental Initiatives in 1997. A portion of this grant was used to implement "Kids Ride Free," which allows those under 18 to ride free in June, July, and August. Youth ridership increased approximately 818% during the summer. The MUTD Board then voted to reduce youth fares from \$0.85 to \$0.25 during the school year, which produced an increase of approximately 250% during the school year months. The summer "Kids Ride Free" program is continuing in 1999 with support from Southgate Mall and Missoula in Motion.

During Stage I Air Alerts, everyone can ride for free. For 7 days during Bike Walk Bus Week, everyone can also ride for free. Mountain Line is able to provide up to 14 free ride days a year (including the 7 during Bike Walk Bus Week). They also offer discounted bus passes to major employers.

3. One key to a successful transit system is education—informing existing and potential riders of the system's benefits.

Mountain Line works closely with Missoula in Motion and the Missoula Ravalli Transportation Management Association (MRTMA) to market transit and transportation demand management (TDM) alternatives. This marketing includes education efforts, promotion of transit at special events, and a discounted pass program for major employers. Mountain Line published a 1998 annual report in as a newspaper insert in the *Missoulian*, which included a coupon for a free ride and statistics on the benefits of riding the bus instead of driving a single-occupancy-vehicle. They are in the process of developing a web site which will have information on routes and schedules.

4. Passenger shelters should be provided at any bus stop with 15 or more daily boardings. Fifteen bus shelters currently exist that have fifteen or more daily boardings, and eight more are planned.

5. Sidewalks should be provided that connect transit stops to the local sidewalk network. Pullouts should be considered for bus stops with more than 10 daily boardings located on streets with operating speeds of more than 35 miles per hour.

Pullouts are considered on a project-by-project basis, and will be installed as part of the 39th/SW Higgins project and the N. Reserve project. Mountain Line regularly reviews new subdivisions and recommends sidewalks and transit provisions.

6. Existing transit vehicles should be made bike compatible through provision of externally-mounted bike racks.

All Mountain Line buses are equipped with bicycle racks which hold up to 2 bicycles.

7. Consideration should be given to providing "park and ride" facilities for commuters and

shoppers driving in from outside the Missoula urban area.

Missoula in Motion is conducting a park and ride feasibility study.

8. Transit-friendly growth should be promoted within the community through requirements placed on new development.

See # 5.

9. A new route should be considered to serve the Lolo and Stevensville areas.

Mountain Line will continue to develop efforts to expand service south of Missoula.

10. A future Linda Vista route could be added to serve the lower Miller Creek area.

As new developments come in, Mountain Line requests that the subdivisions petition into the MUTD.

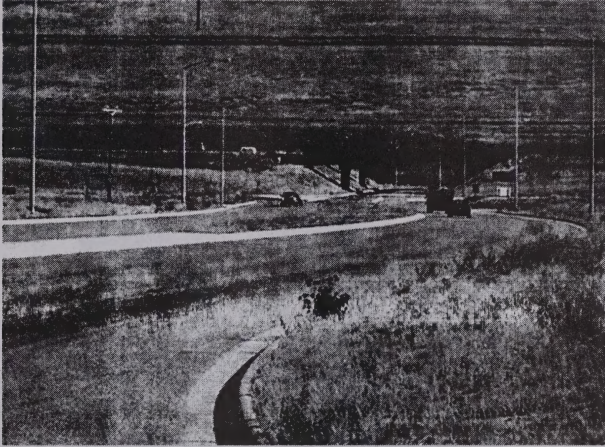
11. Both Russell and Brooks should be considered for corridor service.

Until these corridors have sidewalks, transit service is not feasible. Sidewalks are planned for these areas in future projects.

12. Consideration should be given to providing a number of commuter express routes during peak commuting hours between areas of high residential concentration and areas of high business concentration.

The possibility of express routes may occur in conjunction with future park and ride sites.

6.2 Air Service



The Airport Interchange project was built between March 1997 and February 1999. It was a three-part project consisting of:

1. The creation of a new I-90 interchange and cross-connection between I-90 and West Broadway/Highway 10 West.
2. The extension of five lanes on West Broadway from just west of Reserve to the main airport entrance.
3. The creation and extension of Expressway as a truck route from just west of Reserve to Butler Creek Road.

The overall project was constructed for just over \$10 million. Missoula County's portion was initially estimated at \$1.3 million, but was finalized at \$900,000.

6.2.1 Johnson-Bell Field

Total Operations (take-offs and landings for air carriers, air taxi and commuter, general aviation, and military)

1995	66,886
1998	51,509
2015*	107,200

Commercial Passenger Service

Enplaned	1995	1998	2015*
	175,027	204,853	388,900

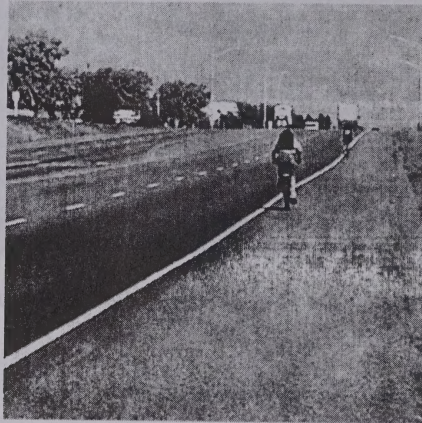
Deplaned	1995	1998	2015
	174,928	202,962	388,900

General Aviation Activity

Operations	1994	1998	Aircraft based at field (private)	1995	1998
	49,454	34,604		94	68

Total operations have decreased since 1995, probably due to Frontier Airlines no longer serving Missoula.

2015 forecasts are from the 1996 Update.



6.2.5 Intermodal Interface

Route 10 of Mountain Line serves the airport upon request (call for pick up from the airport) hourly between 6:45 am and 6:15 pm. There is an airport shuttle which operates between 5 am and midnight, or the last incoming flight.

6.3 Rail Service

Montana Rail Link reports that 10 to 12 freight trains pass through Missoula daily, which is approximately a 50% decrease since the 20 trains reported in the 1996 Update. The total number of trains includes 1 per week down the Bitterroot, and 2 per day for Yellowstone Pipeline.

7.0 Socio-Economic Analysis

7.1 Population and Economic Baselines and Projections

7.1.1 Uses of Population and Economic Data

The socioeconomic baseline information for the Missoula area was developed from two data sources:

- U.S. Bureau of Economic Analysis (1998)
- Montana Department of Commerce (1998)

A more complete picture of population and economic trends will be available in the 2002 Transportation Plan Update, with 2000 Census data. There has been a 13% increase in County population since 1990, but annual growth has slowed in the late 1990s to approximately 1%. Future growth is predicted to be 1.2%. City population continues to grow faster than County population, at an annual rate of approximately 2.8%. This is a result both of new residents and the City's annexation of adjacent areas.

TABLE 7-5
Historic Missoula County & City Population Trends
1940-1998

Year	Missoula County	10-Year % Change	City of Missoula	10-Year % Change
1940	29,038	+33%	18,449	+26%
1950	35,493	+22%	22,485	+22%
1960	44,663	+26%	27,090	+20%
1970	58,263	+30%	29,497	+ 8%
1980	76,016	+30%	33,351	+13%
1990	78,687	+ 3%	42,918	+29%
1998	88,989	+13%*	52,239	+22%*

* change over an 8-year period rather than 10-year

Sources: U.S. Department of Commerce, Bureau of the Census, Census of Population, 1940-1990, 1998.

TABLE 7-6
Historic Employment Trends
Missoula County 1940-1998

Year	County Employment
1940	11,326
1950	18,449
1960	22,485
1970	25,099
1980	39,387
1990	46,913
1998	50,233

Sources: U.S. Department of Commerce, Bureau of the Census, Census of Population, 1940-1990, 1998.

Note: 1998 actual numbers are 7,000 less than 1996 estimates in the 1996 Update.

7.2 University of Montana Enrollment

TABLE 7-7

Fall		Spring		% change
1995	11,753	1996	11,380	
1996	11,886	1997	11,565	1.0%
1997	12,124	1998	11,691	1.5%
1998	12,157	1999	11,723	0.2%

7.4 Population, Economic, and Student Enrollment Projections

7.4.1 20-Year Projections

TABLE 7-8
Summary of Missoula County Projections 1998-2018
(in thousands of people)

Year	Population	Employment	U of M Enrollment*
1998	89.0	50.2	11.9
1999	90.2	51.2	12.0
2000	91.5	52.1	12.1
2001	92.6	53.0	12.2
2002	93.8	54.0	12.3
2003	95.0	54.9	12.4
2004	96.2	55.8	12.5
2005	97.5	56.7	12.6
2006	98.7	57.6	12.7
2007	99.9	58.5	12.8
2008	101.1	59.4	12.9
2009	102.2	60.3	13.0
2010	103.3	61.2	13.1
2011	104.4	62.1	13.2
2013	106.6	63.9	13.4
2014	107.7	64.8	13.5
2015	108.8	65.7	13.6
2016	109.9	66.6	13.7
2017	111.0	67.5	13.8
2018	112.1	68.4	13.9

* Figures include students attending the College of Technology.

Note: Annual population growth rates are the same as used for the 1996 Transportation Plan Update, varying from 1.4% to 1%. Employment growth rates vary from 1.8% to 1.4%, and UM enrollment was assumed to grow at 0.8% annually.

7.4.2 Population Projections

The Missoula County population is predicted to grow by about 23,000 during the 1998-2018 planning period. In 2015, the population of Missoula County is expected to exceed 112,000. For purposes of comparison, Missoula County's population increased by 20,000 people in the 1975-1995

7.4.5 Comprehensive Plan Implications

The 1998 update of the Missoula Urban Comprehensive Plan contains language related to growth management and transportation-related issues. Some of the proposed actions and policies were discussed or recommended in the 1996 Transportation Plan Update. This section will detail the proposals that were not brought out in the Transportation Plan (plain text indicates the language is directly from the 1998 Comprehensive Plan).

Chapter 4 of the Comprehensive Plan, "The Urban Area Environment," includes air quality and natural resources issues. Several of the air quality proposed policies address transportation:

- Increase the efficiency of the transportation system.
- Encourage the use of alternative transportation (bus system, bicycle and pedestrian) through subdivision design and the land use pattern.
- Specify design standards for new development which provide non-motorized transportation networks, development patterns which accommodate public transportation and limits air pollution.
- Continue public education regarding individual action to improve air quality such as the use of alternative forms of transportation and reduction of vehicle miles traveled.
- Address air quality impacts of subdivisions and zoning.
- Include standards in City and County zoning and subdivision regulations intended to limit PM, to require street sweeping and to reduce trips and miles traveled by motorized vehicles, and design standards to reduce the incidence of idling vehicles.

Chapter 5 of the Comprehensive Plan, "Urban Area Services and Facilities," also contains relevant proposals:

Proposed Policies

- Encourage and support new land development within or immediately adjacent to areas where public services are currently available to both maximize local government efficiency and to promote a logical growth pattern.
- Develop an urban area infrastructure plan...Adopt regulatory tools such as adequate public facility and concurrency requirements, urban growth areas and designated development areas, and public dedication and impact fees.
- Consider development design and site planning as elements of each infrastructure decision.

Proposals for Action

- Identify those developed and developing areas that are served by inadequate infrastructure.

- Implement strategies to encourage new development to locate in areas close to existing service systems and to discourage development which does not have the infrastructure necessary to support it.
- Adopt regulatory tools such as adequate public facility and concurrency requirements, urban growth areas and designated development areas, and public dedication and impact fees.

Transportation policies—Overall Goal

Encourage a land use pattern which facilitates all modes of transportation, motorized and non-motorized vehicles, pedestrian and mass transit, for safe, healthy, affordable, efficient and convenient access for residential, commercial and industrial uses and emergency response.

Proposed goals

- Integrate street improvement plans with land use plans and goals.
- Revise off-street parking requirements for new uses and explore the use of minimum and maximum parking standards.
- Consider all feasible sources of funding for transportation facilities and services including impact fees.
- Analyze the subsidies and public benefits of transportation systems.

Proposals for Action

- Implement a bicycle parking requirement for certain uses.
- Adopt standards for roadways which allow flexibility in width and which encourage boulevard and street trees.

Chapter 6, “Shaping Urban Growth,” contains urban growth policies for the Missoula urban area.

Three principles of urban development:

1. To encourage development to locate in areas where facilities are available and where the public costs of providing needed facilities and public services are lowest.
2. To encourage development to fully address the impacts associated with the development.
3. To ensure that the impacts associated with development are fully addressed and that the costs of mitigating those impacts are fairly distributed.

Approval of urban levels of development should be conditioned upon the following:

4. Roads. The road system within the development shall connect to segments of the community’s public road system having adequate capability to handle emergency services and the projected traffic flow, both on an average basis and at peak hours. The transportation system also shall be capable of connecting to a pedestrian system of sidewalks, walkways and trails, to a system of bike lanes and trails and to public transportation. Generally, the level of service for roadway intersections should be “C” as defined in the Transportation Plan.

Chapter 7, “Commercial and Industrial Land Use,” discusses transportation in relation to commercial activity.

The focus of commercial activity continues to be upon major transportation routes rather than two or three primary centers. While commercial uses require safe and convenient access and visibility for customers and deliveries, developing the frontage of every arterial can result in dependence upon the automobile, a resulting deterioration of the physical environment and air quality, increased service costs for local government, and adverse impact on adjacent residential property.

Commercial Designations: Many of the impacts of strip commercial areas can be mitigated through design—limited access, setbacks, landscaping, providing for pedestrian/bicycle and public transportation as an alternative, and other design controls.

Neighborhood Commercial: The community benefits from the reduction of motorized travel, as measured by vehicle miles traveled, which generally occurs from locating commercial sites within neighborhoods.

8.0 Travel Demand Forecasting

8.6 Projected Traffic Volumes

Projected traffic volumes in the 1996 Transportation Plan were calculated based on model runs. Modeling is not being done as part of the 1999 Update process, so new projections will not be made until the 2002 Update. The 2002 Update will be able to use population and economic data from the 2000 Census. There are some locations where traffic volumes in 1998 have already exceeded, or are close to exceeding, the 2005 projections from the 1996 Transportation Plan:

TABLE 8-1

Locations with High Increases in Traffic Volumes

Location	1998	<i>Projected</i>	<i>Projected</i>
		2005	2015*
Pattee Canyon Drive, just south of Canyon Gate Loop	1300	800	1000
23 rd Ave, 140' south of 39 th	7400	5800	6500
S 3 rd , between Grant and Garfield	15,400	13,200	14,800
Flynn Lane, 300' north of Mullan	1900	700	1500
Blue Mountain Road, 500' north of Hwy 93	1800	1600	1900
Rattlesnake Dr, just south of Murry	7100	6800	7400
South Ave, between Catlin and Washburn	13,100	13,200	
South Ave, between Oxford and Regent	11,900	11,700	
Reserve St, between South and Central	27,800**	28,700	
Pattee Canyon Drive, just east of Higgins Ave)	6800	6400	
Upper Miller Creek Road, 800' south of the Wye	4700	4500	
Hillview Way, just south of 39 th	6300	6600	
Reserve St, between Sunset and Mount	26,400**	26,600	
Reserve St, 3 miles north of Mullan	21,200**	21,500	
Orange St, north end of MRL overpass	16,000	15,900	
E. Broadway, east of Van Buren	8900	8900	
MT 200 west of Flynn Lane	10,200	10,400	

*when relevant

**1997 volumes; the 1999 Reserve St counts are preliminary, but are all approximately 3,000 more than 2005 projections

Another note on traffic volume projections in the 1996 Transportation Plan is that two count stations on Brooks Street (southwest of Russell St, and northeast of South Ave) had abnormally high counts in 1994. These were the counts used in the 1996 Plan, for existing and projected volumes. The 1992, 1996, and 1998 counts for those two stations have been consistently 4,000 and 2,000 less than the 1996 counts, respectively. Therefore, the projected traffic volumes at those locations on Brooks should be recognized as elevated.

	Station	Location	1992	1994	1996	1998
23	Brooks, s/w of Russell		22,660	26,620	22,100	22,130
24	Brooks, n/e of South		23,630	26,590	19,450	24,610

9.0 Roadway System Needs Assessment

9.1 Arterial Corridor Analysis

9.1.1 Reserve St Corridor

1998 Traffic Volume	16,700 – 27,550
High Crash Locations	7
Bicycle Facilities	Brooks to I-90
Pedestrian Facilities	Brooks to I-90
Transit Service	added Target and Albertson's shopping centers

9.1.2 Russell St Corridor

1998 Traffic Volume	12,500 – 22,100
High Crash Locations	8

9.1.3 Higgins Ave Corridor

1998 Traffic Volume	10,700 – 22,000
High Crash Locations	5

9.1.4 Madison St/Arthur Ave Corridor

1998 Traffic Volume	9,600 – 17,700
High Crash Location	1

9.1.5 Brooks St Corridor

1998 Traffic Volume	15,200 – 23,530
High Crash Locations	6

9.1.6 Orange St/Stephens Ave

1998 Traffic Volume	14,500 – 21,620
High Crash Locations	8

9.1.7 Broadway St Corridor

1998 Traffic Volume	10,220 – 23,300
High Crash Locations	6

9.1.8 S 3rd Corridor

1998 Traffic Volume	3,000 – 16,800
High Crash Locations	3

9.1.9 S 5th/S 6th St Corridor

1998 Traffic Volume	2,500 – 13,000
High Crash Locations	4

9.1.10 South Ave Corridor

1998 Traffic Volume	6,100 – 14,500
High Crash Locations	3

9.1.11 39th St/SW Higgins Corridor

1998 Traffic Volume	9,880 – 11,540
High Crash Location	1

9.1.12 Van Buren St/Rattlesnake Dr Corridor

1998 Traffic Volume	5,200 – 15,200
High Crash Location	1

9.1.13 S 14th/Mount Corridor

1998 Traffic Volume	8,400 – 9,420
High Crash Locations	3

10.0 Transportation Demand Management

10.3 Implementation

INTRODUCTION.

The Missoula community, in its 1996 Transportation Plan Update, set forth this goal: "...to reduce projected vehicle miles traveled (VMT) by 5% within the next five years and by 10% within the next ten years."

What is the reason for this goal? The community of Missoula continues to grow. Estimates are that traffic volumes increase from 130% to 200% of the population increases. Reasons for this in Missoula parallel those elsewhere:

- Longer trips: Urban growth results in "sprawl," necessitating longer trips to achieve the same purposes.
- More work-related trips: Families have more individuals holding jobs, resulting in more individuals driving to and from work.
- More personal trips: Individuals are making more trips for more personal purposes: entertainment and recreation, shopping, personal errands.
- Missoula's continued growth as a regional trade center with associated traffic from outside the study area.

The consequence of this motor vehicle use can be seen statistically: our most congested corridors will have an increase of up to 100%, or double current volumes, by the year 2015. The "Level of Service" at many intersections will seriously decline despite planned system and roadway improvements. With this will come the risk of increased contributions to air pollution from motor vehicles.

Significant efforts are planned to increase the ability of the roadway system to handle these increases in volume. However, they will not be sufficient to provide the ease of access which residents demand. Further, in many situations those improvements, which would be necessary to provide acceptable levels of service, are neither physically possible nor are socially or financially affordable.

Air pollution effects must also be considered. Vehicles contribute to air pollution problems in a variety of ways. Cars idling at congested intersections create clouds of carbon monoxide, which under certain conditions can concentrate and threaten national air quality standards. Cars, which repeatedly slow down and speed up on congested roadways create more air pollution than those which maintain a steady speed. Even without congestion, ever-increasing vehicle miles traveled (VMT) translate into air quality problems. In winter, when Missoula's air is stagnant, every vehicle mile traveled puts more particulate into the air from road dust and street sand. The latest source apportionment study (1995-96) estimated that 64.9% of Missoula's winter and springtime particulate problem is attributable to cars.

Thus, while the community strives to increase the supply of transportation facilities for motorized vehicles, it is also highly motivated to manage the demand for those facilities. This

proposal sets forth a long-term vision, documents the efforts made to date, and then suggests a course of action to be carried out over a 5-year period.

VISION: AFTER A DECADE OF TDM IN MISSOULA.

In the year 2008, Missoula will have a transportation system that provides easy and convenient access for people using all modes of travel. Such a system will have the following characteristics, as compared to the system as studied in the 1996 Missoula Urban Transportation Plan (characteristics denoted with *(m)* can and will be numerically reported):

- I. There will be measurable improvements in public roadway travel:
 1. Lower motorized vehicle miles traveled (*m*)
 2. Fewer single-occupant motorized vehicles (*m*)
 3. Increased use of non-SOV travel modes:
 4. Fewer crashes (*m*)
 5. Higher LOS at major intersections (*m*)
- II. Facilities for alternatives to automobile travel will be increased.
 1. More bicycle and pedestrian facilities, including off-street trails (*m*)
 2. Increased bus service and transit amenities (*m*)
 3. Ridesharing facilities will be established: park & ride lots, matching services (*m*)
- III. Travelers will be respectful of other travelers, the environment, and community needs
 1. Increased awareness of alternatives to SOV-travel
 2. Less road rage
- IV. Community policies and behavior will encourage non-SOV travel
 1. Continued improvement in air quality (*m*)
 2. Less need for construction and maintenance of new roads
 3. Sprawl discouraged by effective, integrated land use and transportation planning
 4. Implementation of parking demand management
 5. Community-generated initiatives to improve access for all without increasing SOV-travel
 6. TDM services will be financially supported by the community

BACKGROUND TOWARD THE 10-YEAR VISION

Progress has been made over the years by both the public sector and the private sector. Highlights include:

- The Mountain Line bus system has operated successfully in Missoula for twenty years. Despite the low-density urban environment, ridership on the bus has increased over the past five years. A record level of more than 651,000 passengers in 1998 was achieved in part by free event shuttles, a "kids ride free" program in summer, and reduced youth fares (only 25 cents) the rest of the year. The circulator trolley, the Emerald Line, is also operating successfully.

- For 15 years, the City has staffed a bicycle/pedestrian office. Through it, and other offices, the City has promoted alternative transportation with "Try A Better Way Day"; Bike Walk Bus Week; installation of hundreds of bicycle racks, bike lanes, sidewalks, a trail system, and bridges over major barriers; as well as improvement of other non-motorized facilities.



- For two years, the Missoula Ravalli Transportation Management Association (MR TMA) has focussed on getting commuters to travel by non-SOV means. MR TMA has launched a successful vanpool program from the Bitterroot, created a system of park and rides in the Bitterroot and is working to do the same in Missoula, and is strengthening its "Guaranteed Ride Home" program. MR TMA is currently conducting a school outreach program and offers a zero-interest bike purchase loan program. These efforts have saved a total of 1,185,371, VMT between August 1, 1997 and June 1, 1999.
- The University of Montana provides more than \$83,600 in funding to Mountain Line so that all students, staff, and faculty can ride the bus free with a Griz Card. In addition, it has bicycle parking for 4,800 bikes and offers discounted fees for carpool parking decals.
- The City-County Health Department has consistently emphasized the impact of transportation on air quality. Among many efforts has been a public education campaign encouraging drivers to consolidate their trips to reduce cold engine starts ("trip chaining").
- Parking in downtown Missoula has historically been inexpensive and generally available despite complaints to the contrary. Currently there are 2,020 publicly managed parking spaces (on-street and off-street meters, off-street lots, and the parking structure) and a significant number of privately managed parking spaces in the downtown area. Public leased parking rates are increasing to match those of private lots. Proposals from the Missoula Parking Commission to raise the meter violation fees would, if implemented, help convey the true costs of driving/parking to motorists. In addition, the Parking Commission has 8 bicycle lockers in the central parking garage, and offers preferential parking for city carpools and MR TMA vanpools.
- In Spring 1998, the Chamber of Commerce sponsored a major effort by the students involved in Leadership High School, of which one highly visible activity at Hellgate High School dramatically reduced the number of motor vehicles there for one day.
- The Office of Planning and Grants led an effort to rewrite the comprehensive plan, subdivision regulations, and zoning regulations to improve conditions for non-motorized transportation and alternatives to single-occupant motor vehicles, and to reduce the need for vehicle miles to be traveled. In addition, several agencies review proposed subdivisions and

developments for their impacts on vehicle miles traveled, including the Health Department, City Engineering, the Bicycle/Pedestrian Office, the Mountain Line, the Parks and Recreation Department, and MR TMA.

FIRST STEP TOWARD THE 10-YEAR VISION: PHASE I.

With all of this effort, why is there need for additional TDM activity? The traffic projections make it clear: current efforts are not sufficient. In light of that, local government adopted a goal in the 1996 Missoula Transportation Plan Update "to reduce projected vehicle miles traveled (VMT) by 5% within the next five years and by 10% within the next ten years."

To implement this goal, the Transportation Policy Coordinating Committee (TPCC) charged its Technical Advisory Committee (TTAC) to develop and implement a program of action, which began by forming a "TDM subcommittee." That subcommittee is composed of all agencies with professional responsibility in TDM-related areas: Mountain Line, the University of Montana, the Health Department, MR TMA, the Parking Commission, the Bicycle/Pedestrian Office, and the Office of Planning and Grants. The subcommittee designed a three-phase course of action:

Phase I: To develop and implement a variety of TDM strategies with a variety of public and private employers as pilot efforts. *(Completed).*

Phase II: To expand those Phase I efforts which were effective. *(A 5-year phase; this proposal is for the first of the five)*

Phase III: To institutionalize TDM efforts within the community. *(Long-term goal)*

Between July 1998 and March 1999, Phase I was initiated with CMAQ funds through a contract with Stuart Anderson and Associates. The first accomplishment was the creation of **Missoula in Motion (MIM)**, a consortium of agencies to direct and coordinate the community's efforts to achieve TDM. The principal activity of MIM has been to initiate contact with employers throughout the city. These efforts will produce long-term results. The process is a slow and deliberate one: educating employers, then helping them identify how TDM will be helpful to their organization, and finally coaching them through the design and implementation of a TDM program. In most cases, we are now only beginning the relationship with employers, and can expect to see TDM programs implemented in six months to two years.

In the months that the TDM project has been operational with CMAQ funding, the community has achieved the following:

1. Getting the word out.
 - Developed an excellent, multi-insert brochure about TDM; distributed it widely.
 - More than 160 principal businesses received information about TDM and an invitation to the initial conference.
 - Presentations made to Chamber of Commerce and Missoula Downtown Association.
 - With the Bicycle/Pedestrian Office and the Health Department, developed a "Best Practices" recognition program, in which three employers were selected for their efforts

to encourage employees to commute by a non-SOV mode, and were shown in videos aired in January/February 1999.

2. Opening Conference: top management of 60 major employers attended the opening TDM conference; participants expressed concern about the traffic projections and interest in TDM.

3. On-going outreach to all conference participants, exploring their interest in and ability to implement TDM programs at their worksite.

4. Major employers beginning TDM programs.

- St. Patrick Hospital has begun a comprehensive TDM program for its 1,250 employees, is providing valet parking for carpooling employees, and is developing a ridesharing and a telecommuting program. They have created a Commuter Club funded with more than \$30,000 in the first year. The club awards points to members who use alternative transportation to drive to work. The points will be redeemable at downtown merchants such as The Bon, the Trailhead, Open Road, and Butterfly Herbs. The hospital provides discounted bus passes to employees at a cost of \$16,560; will encourage variable work hours and telecommuting; and will offer a Guaranteed Ride Home program. Twenty percent of all employees participate in the Club and saved 140,000 vehicle miles traveled (VMT) between November 10, 1998 and June 29, 1999.
- Region One Headquarters of the U.S. Forest Service (250 employees) has developed a preferential carpool parking system in conjunction with the Parking Commission, is looking at several TDM measures, and has surveyed all employees.
- The University has verbally committed to implementing a telecommuting program, and is looking at ways of spreading out class start times to relieve peak hour congestion. Students have passed a measure to fund a transportation coordinator position. The Parking and Transportation Task Force also addresses these issues.

5. Technical assistance and training:

- Twelve people participated in a training session on telecommuting.
- Eight participated in a training session on how to be an employee trip coordinator (ETC).
- MIM staff and consultants followed up with participants at their work sites to encourage implementation of teleworking programs.

6. Transportation Demand Management Handbook: A comprehensive handbook was developed and distributed to participants in the opening conference. The handbook includes detailed information on all of the major aspects of TDM—how to information on teleworking, variable work hours, ridesharing, and others.

7. Under development: project staff...

- examined possible park and ride sites;
- met with Mountain line regarding how to expand bus service;
- collected and disseminated information on tax incentive programs;
- met with OPG and Air Quality staff regarding land use and transportation issues;

- met with the Parking Commission regarding carpool spaces.
8. Coordination. The seven agencies involved in the MIM project have become a close working team, with a refined ability to conceptualize, direct, and coordinate all of the community's efforts to achieve the VMT reduction goal.
 9. Evaluation: Missoula in Motion is developing measurement strategies with the assistance of a consultant. Based only upon the MR TMA carpool and vanpool programs and St. Patrick's Hospital's Commuter Club, TDM measures have saved more than 1,325,000 vehicle miles traveled as of June 1999.

SECOND STEP TOWARD THE 10-YEAR VISION: PHASE II.

Phase I was conceptualized as a "launching" of TDM activity for the Missoula community. Missoula in Motion was created, and under its direction, several activities focusing on how employers can reduce travel demand were initiated. However, Phase I efforts ended in June 1999. The community's on-going need will be to continue and expand those successful efforts begun in Phase I, initiate appropriate additional TDM efforts, and track the effects of TDM on traffic volumes and mode split.

Through the five-year period of Phase II, the community will begin to see the cumulative effect of sustained effort. Phase II will be implemented using four interrelated approaches:

1. On-going coordination of efforts of many agencies via the **Missoula in Motion** Steering Committee (formerly called the TDM Subcommittee),
2. Encouragement of Missoula area employers to develop worksite-based TDM programs by the Missoula Ravalli Transportation Management Association,
3. Development and implementation of community TDM services; and
4. Technical assistance, training, and support by consultants.

A. ACTIVITIES AND OBJECTIVES.

Principal activities for Phase II are listed below. For each, the 5-year Phase II target is identified, the first year objective(s) are defined, and a brief discussion of the need for the activity and resources required is presented. Note: All objectives are for levels of accomplishment in addition to that which is in place at the end of Phase I.

1. Activities implementable by employers:

- Alternative work schedules

Five-year target: Fifty area employers will have some form of written policy supporting employees working alternative work schedules.

Objective: Two employers involving twenty employees will implement alternative work schedule programs.

- Telecommuting
 - Five-year target:** Fifteen local employers will have some form of written policy supporting employees conducting their employment duties from their home; at least one employee for each employer will be actually teleworking at least one day a week.
 - Objective:** Two local employers and five employees will be committed to using telecommuting strategies.
- Worker Bus Service
 - Five-year target:** Five employers will be using an employer-operated worker shuttle service.
 - Objective:** One employer will be committed to using a worker shuttle service.
- Ridesharing.
 - Five-year target:** One thousand employees will be sharing rides with each other.
 - Objective:** Two employers will be encouraging their employees to participate in a ride-sharing program.
- Preferential carpool spaces
 - Five-year target:** Ten employers will have designated preferential parking spaces for employees who carpool.
 - Objective:** One employer will have at least four total parking spaces allotted to employees who carpool to work.
- Active Transportation facilities
 - Five-year target:** Ten employers will have facilities such as secure bike parking and showers, which support employees who choose active modes of commuting to work.
 - Objective:** One employer will install facilities such as secure bike parking or showers, which encourage employees to bike or walk to work.
- Incentives
 - Five-year target:** Thirty employers will offer some form of incentive to all employees to commute in a way other than driving alone.
 - Objective:** Two employers will offer incentives to all employees to commute by a non-SOV means. As examples, incentives might include discounted or free bus passes, time off, gifts, recognition programs, or cash.

Discussion: All of these objectives are ones which employers will implement. The challenge to **Missoula in Motion** is to use outreach and support to get employers to consider, develop, and implement activities. MIM will accomplish this through a contract with MR TMA. Building on the momentum of Phase I, employers will be encouraged to develop and/or expand TDM programs.

Budget implications: Funding is required to engage a staff person at MR TMA, local travel, employer training, and for use of training facilities.

2. Community TDM services.

- **Park and Ride Program**

Five-year target: An integrated system of park and ride sites will be operational to relieve traffic into the city and directly into downtown.

Objective: The design of the overall park-and-ride system will be completed, and one park and ride site will be developed in strategic locations in metropolitan Missoula.

Discussion: MR TMA will continue its work to establish such sites, to make possible commuting to the urban area by personal motor vehicle but not creating congestion by those vehicles being driven into the core of the city. Persons may leave from a park and ride site by carpool, bus, shuttle, or bicycle.

Budget implications: Staff time and funding will be required to identify the sites, negotiate lease arrangements with property owners, and support expanded transit to the sites.

- **Vanpool program.**

Five-year target: To reduce VMT by 1,000,000 miles per year by operating a vanpool program which will be an integral part of the Mountain Line.

Objective: To continue the successful Bitterroot-to-Missoula vanpool program, with an average of 60 daily commuters, yielding 300,000 VMT not traveled.

Discussion: This has been one of the most successful TDM programs to date. Initiated and initially operated by MR TMA, operation of the vanpool was taken over by Mountain Line as of January 1, 1999.

Budget implications: This program is currently funded and will continue for the next year. In subsequent years of Phase II, additional funding may be necessary to meet the need and continue the service.

- Ridesharing support

Five-year target:

The ride-sharing database at MR TMA will include 3,000 people, of whom at least 300 regularly rideshare to and from work.

Objective:

To maintain and increase the current carpooling service provided by MR TMA.

Discussion:

MR TMA currently has a database software program for matching persons wishing to rideshare with others of the same desire. In addition to a general community program, MR TMA is offering this program as a service to specific employment sites—currently St. Patrick Hospital and the University of Montana.

Budget implications: There are no implications for the Phase II first year budget.

- School Pool program

Five-year target:

Eight schools in the Missoula area, with 40 school pools, will provide ridesharing for an average of 120 students.

Objective:

To initiate a School Pool program, having 3 schools with a total of 5 carpools carrying an average of 15 students.

Discussion:

The School Pool Program is a coordinated parent carpool-to-school program that provides assistance to parents in organizing carpools to their children's school. The School Pool Program is a successful way to help parents save time and money, decrease traffic congestion around schools, and improve safety.

Budget implications: Funds will be required for staff to increase the ride-matching activities

- Guaranteed Ride Home

Five-year target:

To have the capability of providing a ride home to any non-SOV commuter who needs it any time during the year.

Objective:

To have the capability of giving 200 rides home during the year on an emergency basis for residents who have ridden the bus or ride-shared to work.

Discussion:

A community-wide guaranteed ride home program is currently in place with MR TMA, Mountain Line, and Yellow Cab. This needs to be maintained and expanded. It is hoped that some larger employers will operate their own.

Budget implications: Additional funding will be needed to cover costs of the rides home.

- Employee Transportation Coordinator (ETC) network

Five-year target: All employers conducting a work-site based TDM program will have one person participating in the ETC network.

Objectives:

1. A network of not less than 4 ETCs will be created and meet at least quarterly.
2. Assist the City and the County in their implementation of a TDM program by providing staff time to serve as the ETC.

Discussion: By contract, a MR TMA staff person will serve as the ETC for selected employers for a limited time, support employers in their effort to designate their own ETC, and coordinate the ETC network.

Budget implications: Staff time, up to 8 hours per week for this first year, will be required to carry out this function.

- TDM Resource Center

Five-year target: There will be a TDM resource available during all working hours center in a visible and accessible location.

Objective: To have a physical location containing resource materials pertaining to TDM open to the public, a MIM resource hotline phone, and an internet web site.

Discussion: Employers will be invited to come into the resource center and browse or borrow materials. The center will be able to connect inquirers to individuals who have expertise. The center will be based at MR TMA, with references to it in other public places such as the library.

The web page will be able to provide transit schedule and cost information, carpooling information and a carpooling application, links to employee trip coordinators at employer sites, parking information, and other information. Links to related websites may be included.

Budget implications: Funding will be necessary to design a center, and to acquire, duplicate, and disseminate materials, and to maintain the telephone hotline.

- On-going public education and promotion of TDM

Five-year target: To have Missoulians understand the concept and importance of TDM by annually having TDM the subject of at least two television PSAs announcements and at least one major news story.

In addition, school outreach activities will include 40 presentations to not less than 1,200 students in the Missoula urban area.

Objectives:

- to communicate with neighborhood councils and associations regularly;
- to distribute 1,000 flyers about the benefits of not traveling by SOV to the Missoula community;
- to have 5 informational articles in the newspaper;
- to educate the public about the benefits of transit passes;
- to initiate a mentoring program with Mountain Line to encourage bus ridership;
- to conduct two special programs which bring public attention to TDM.

Discussion:

Continually placing the "TDM message" before the public, in both mass media and selected-audience venues, is critical to building a belief by individuals that they can travel by another means than SOV without sacrificing convenience.

Budget implications: Funding will be required to develop and distribute materials.

- Incentives

Five-year target:

To conduct the annual "Transportation Best Practices" recognition campaign, expanded to include some recognition for efforts by all employers.

Objective:

To conduct an annual recognition program in which the best TDM practices of local employers are recognized and publicized.

Discussion:

This program is currently being sponsored by TPCC with funding from CMAQ through the Bicycle/Pedestrian Office and the Health Department. It will provide television airing of the positive efforts made by 3-4 employers to encourage their employees to travel by a non-SOV mode.

Budget implications: Some funding will be required to provide "start-up" incentives for employers.

- Bicycle/Pedestrian Facilities

Five-year target:

To continue implementation of the Non-Motorized Transportation Plan and the Bicycle System Recommendations and Pedestrian System Recommendations of the 1996 Transportation Plan Update.

Objective: To continue implementation of appropriate facilities for travel by bicycle and on foot, including bike lanes, off-street trails, the bicycle commuter network, sidewalks, and a crosswalk system.

Discussion: This objective has been implemented by a number of city agencies, and will continue. The need for many facilities has been identified in both the Non-Motorized Transportation Plan and the 1996 Transportation Plan Update.

Budget implications: In the first year of Phase II, no funding for bicycle and pedestrian facilities is requested.

- Land use; planning, zoning, and community development

Five-year target: Missoula's developing land use patterns support and encourage non-motorized transport.

Objective: To review all proposals for community developments, encouraging that they comply with the requirements of the Non-Motorized Transportation Plan, the 1996 Transportation Plan Update, and provide guidance in the new zoning and new subdivision regulations for non-motorized facilities.

Discussion: Various members of the Missoula in Motion consortium have carried out this activity during Phase I. Current activities will be continued.

Budget implications: None for Phase II, year 1.

3. Transit Routes and Hours.

Five-year target: To provide the level of service determined in the first year of Phase II.

Objectives:

1. To have a written plan for expanded routes/hours for bus service between Mountain Line and all other appropriate transportation agencies, and a plan for funding this service.
2. To have the Trolley, buses, or shuttle vans linked to Park and Ride sites.

Discussion: In Phase II, **Missoula in Motion** will engage the Mountain Line, employers, the City, and others in exploring ways to improve the routes and hours of bus service, in order to increase ridership. This will include support of a public education campaign directed at potential riders.

Budget implications: In the first year of Phase II, only a limited amount of funds are required for staff time to work with the various agencies toward an agreement for expanded bus service.

B. EVALUATION OF IMPACT

Five year target: To have both a routinized data collection process for VMT and other vision measures, and comparative 5-year data on the impact of the TDM program.

Objective: To provide a report on VMT reduction and other "Vision" measures by March 1, 2001.

Discussion: The overall goal of Missoula's TDM activity is to reduce vehicle miles traveled, per the Transportation Plan. Related are several other measures identified in the section above titled "Vision: After a Decade of TDM in Missoula." Each year in Phase II, measurements should be more definitively calculable than were able to be collected in Phase I. By the end of the first year of Phase II, a framework for collecting data will be established, and calculations made about the impacts as of that date.

Budget implications: Funding will be required to collect the data necessary to evaluate the TDM measures.

C. METHODOLOGY. The MIM Steering Committee will coordinate the many current and on-going activities of the various agencies. This group will also provide regular guidance and direction to implementation of all new Phase II activities.

The majority of the activity proposed in this first year of Phase II requires the time of professional staff. Missoula in Motion has contracted with the local TDM agency, MR TMA, to do this. Activity will involve working with area, and developing and implementing the TDM services listed in sections 1 and 2 under "Activities and Objectives" (page 10-6).

D. PROGRAM EMPHASIS BY YEAR IN PHASE II

It can be seen that the initial emphasis in Phase II will be on working effectively with employers to encourage them to implement TDM programs at the work site. Closely related to this emphasis will be an emphasis on those services we provide to the community directly which will do the most to support employer efforts. As the years of Phase II pass, the emphasis will shift increasingly to strengthening the bus system and carefully measuring the impact of all of the activities on the community's traffic. On this chart, "1" represents a lower proportion of the available time of staff; "5" represents a high proportion of TDM staff effort.

Program activity	year 1	year 2	year 3	year 4	year 5
1. Employer-implemented activities	5	5	5	5	5
2. Community TDM services					
Park and Ride Program	5	5	4	3	3
Ridesharing support	5	5	4	4	4
Guaranteed Ride Home	5	4	3	2	2
TDM Resource Center	3	3	2	2	1
Public Information/Education	5	5	5	4	4
Land use	1	1	2	2	3
3. Transit Routes and hours	2	3	4	5	5
4. Evaluation	3	3	3	4	5

E. MISSOULA IN MOTION CONSORTIUM ACTIVITIES.

Transportation Demand Management in Missoula is a multi-agency effort, involving a wide range of public and private resources. It includes a community commitment to physical facilities for travel alternatives, and a resolution to provide several programs and services.

While this TDM proposal does not include any new physical infrastructure, the chart below identifies most of the projects **currently underway**, with an X denoting primary involvement in the project.

Infrastructure activities

PROJECT	SPONSOR				
	CITY	MRA	COUNTY	STATE	MOUNTAIN LINE
Missoula Bicycle System (Lanes)	X				
South Ave Walkway west of Reserve			X		
Bicycle Commuter Network	X	X			
Bicycle Racks program	X				
Master Sidewalk Program	X				
Pedestrian Crosswalk Plan	X				
California Street Bike/Ped Bridge	X	X			
Northside Bike/Ped Overpass (completed)	X	X			
39th/SWHiggins/S Higgins reconstruction	X			X	

with bike lanes and sidewalks					
Bicycle detector loops at signalized intersections	X			X	
Orange Street Bridge reconstruction with bike lanes, sidewalks, connection to riverfront trails	X			X	
Trail development	X	X	X		
More buses					X
Bus transfer center					X

Below is a chart showing the involvement of many public agencies in TDM program activities. Because the current level of commitment and involvement, in itself, is not sufficient to spur the community to significant reduction in VMT, key new activities are proposed. On the next page, all activities marked with a double asterisk (**) are proposed for expansion with CMAQ funds.

Finally, regular meeting of the Missoula in Motion Steering Committee will strengthen coordination of all activities in the next page.

TDM-related program activities: current and proposed ()**

TDM Activity	MR TMA	Bike Ped Office	Mtn Line	U of M	Parking Comm	Health Dept	OPG	City, MRA County, State
<u>I. EMPLOYER OUTREACH</u>	Substantial, **	Response on demand			Response on demand		Response on demand	
<u>II. COMMUNITY TDM SERVICES</u>	Bitterroot sites developed **		Integrated into service plan		Have close-in lots			
Park and Ride								
Ridesharing	Ridematching software in use. **	Encourage city employees	On-site via vanpool	On-site support				
Vanpooling	Currently operating at capacity from Bitterroot							
Guaranteed Ride Home	Initiated, funds limited **		Initiated, funds limited					
Resource Center	Reference info available **	Reference info available						
Public info and Education	Substantial **	Substantial	Substantial	Limited	Limited	Substantial	Limited	
Incentives, Recognition	**To be developed	Best Practices funding, Bike Walk Bus Week.	Kids ride cheap, free in summer	Griz card get free bus		Best Practices funding		
Bike/Ped Facilities and Behavior	Bike Loan Program	Bike Racks, support bike/ped facilities, numerous programs			Bike lockers in parking garage			
Parking demand Management					Proposed increase in fines, lease parking			
Bus service, Routes and hours			Improved service sought	Looking at increased service				
Zoning, subdivision regulations, review of development proposals	Limited	Substantial	Limited		Limited	Substantial	Substantial	
Development Impact fees						Limited	Substantial	
Neighborhood plans, promotion of Neighborhood facilities							Substantial	
Development of Infrastructure (see previous page)			Substantial					extensive

** New or expanded under Phase II year I grant proposal.

10. 4 Transportation Survey

The TPCC conducted a transportation survey in 1997 to develop a profile of commuters in the Missoula area. More than 2,800 employees filled out the survey. Most respondents reported that they used single occupant vehicles (SOV) for commuting. More than 70% commuted alone at least 4 days per week.

Twenty-four percent used an alternative to SOV at least two days per week. Nearly 80% of urban respondents and 65% of outlying respondents said they would consider alternative methods of getting to work.

The survey found that an encouraging number of people would consider alternatives to driving alone if the right incentives were given. Based on the survey, the most important incentives are coordinated carpools and vanpools, guaranteed ride home programs, and improved bus routes. A key to reducing SOV travel in Missoula is participation by area employers. Local government should also play a role in improving transportation alternatives. Missoula in Motion and MR TMA are working toward providing some of these incentives. If the people of Missoula County wish to maintain their current quality of life, new commuting alternatives need to be implemented.

11.0 Financing Transportation Improvements

FUNDING SOURCES FOR MISSOULA AREA TRANSPORTATION PROJECTS

*Prepared by Montana Department of Transportation
Planning Division – Urban Planning Section*

11.1 Background

The intent of this report is to identify the traditional Federal and State sources of funds available for funding transportation related projects and programs in the Missoula area. The sources shown are primarily Federal programs with the exception of the State gas tax funds.

The report presents a narrative description of the potential funding sources, including the source of revenue, required match, purpose for which funds are intended, means by which the funds are distributed, and the agency or jurisdiction responsible for establishing priorities for the use of the funds.

11.2 Funding Sources

The following is a list of Federal and State funding sources developed for the distribution of Federal and State transportation funding including Federal funds the State receives under the Transportation Equity Act for the 21st Century (TEA-21). A narrative description of each source follows:

1. STPU – Surface Transportation Program - Urban Funds
2. CMAQ – Congestion Mitigation & Air Quality Improvement Program
3. MDT Discretionary – Air & Congestion Program
4. CTEP – Community Transportation Enhancement Program
5. STPP – Surface Transportation Program - Primary Funds
6. STPS – Surface Transportation Program - Secondary Funds
7. IM – Interstate Maintenance Funds
8. STPHS – Surface Transportation Program - Hazard Elimination Funds
9. NHS – National Highway System Funds
10. STPRP – Rail/Highway Crossing Protective Devices Program
11. STPRR – Rail/Highway Crossing Elimination of Hazard Program
12. HBRRP – Highway Bridge Replacement and Rehabilitation Program
13. RTF – Reconstruction Trust Funds (State)
14. FTA – Federal Transit Administration - Section 5307, 5309 & 5310
15. State Fuel Tax Funds – City and County

It should be understood that other funding sources are possible, but those listed above reflect the most probable sources at this time.

1. STPU - Surface Transportation Program - Urban Funds

The Montana Department of Transportation (MDT) distributes STPU funds to 14 urban areas; the amount each area receives is based on population. Of the total received, 86.58% is federal and 13.42% is state match, which comes from the state Special Revenue Account that is funded principally by fuel taxes and GVW fees. The STPU funds are used primarily for major street construction, reconstruction and traffic operation projects on the designated Urban Highway System. Priorities for the use of STPU funds are established at the local level through established planning processes with final local approval in Missoula by the Policy Coordinating Committee.

2. CMAQ - Congestion Mitigation and Air Quality Improvement Program

The Federal funds available under this program are used to finance transportation projects and programs to help meet the requirements of the Clean Air Act. Eligible activities include transit improvements, travel demand management strategies, traffic flow improvements, and public fleet conversions to cleaner fuels, among other things. At the project level, the use of CMAQ funds is not constrained to a particular roadway system (i.e. Primary, Urban, and NHS). Of the total received, 86.58% is federal and 13.42% is non-Federal match. A requirement for the use of these funds is the estimation of the reduction in pollutants resulting from implementing the program/project. These estimates are reported on a yearly report submitted to FHWA. Projects are selected through the MPO process and prioritized based on air quality benefits. The estimated FFY 1998 allocation of CMAQ funds for Missoula projects is \$672,392. Due to the way TEA-21 allocations have been developed the yearly CMAQ allocations available for Missoula will increase through the life of the Bill. MDT is unable to calculate the amount of this increase for each year, but for planning purposes it would be safe to assume a flat \$672,392 a year (CMAQ-federal dollars).

3. MDT Discretionary – Air & Congestion Program

The MDT Discretionary funds available under this program are used to finance transportation projects in nonattainment areas and areas deemed “high risk” identified by the EPA and the Montana Department of Environmental Quality. Projects located in nonattainment areas are subject to CMAQ and STP eligibility requirements and projects located in “high risk” areas are subject to STP eligibility requirements. Projects must be within nonattainment area boundaries or within city limits in “high risk” areas and must be located on MDT routes. The funding ratio for this program is 86.58% federal and 13.42% is state match. A requirement for the use of these funds is the estimation of the reduction in pollutants resulting from implementing the project. These estimates are reported on a yearly report submitted to FHWA. MDT District Administrators nominate projects with guidance from the Planning Division in determining eligibility. Projects are prioritized and selected based on air quality and congestion mitigation benefits with priority to projects consistent with control strategies and transportation plans.

4. CTEP - Community Transportation Enhancement Program

The Federal Funds available under this Montana program are used to finance transportation projects that enhance the present surface transportation system. Projects must be located on public property or on property to be procured for public use. Eligible activities/ categories are:

- Pedestrian and Bicycle facilities
- Acquisition of scenic easements and historic or scenic sites
- Scenic or historic highway programs
- Landscaping and other scenic beautification
- Rehabilitation and operation of historic transportation buildings, structures or facilities (including railroads)
- Historic preservation
- Archaeological planning and research
- Mitigation of water pollution due to highway runoff
- Preservation of abandoned railway corridors (including the conversion and use for pedestrian or bicycle trails)
- Control and removal of outdoor advertising

Newly eligible activities/categories with the passage of TEA-21 are:

- Safety education activities for pedestrians and bicyclists
- Establishment of transportation museums

- Projects that reduce vehicle-caused wildlife mortality

The Federal share for CTEP projects/activities is 86.58% with a required local match of 13.42%. Under CTEP (TEA-21), Missoula County is allocated \$187,351 and the City of Missoula is allocated \$224,796 for the 1999 fiscal year.

For more specific information on the CTEP program, contact the CTEP Planning Coordinator at 444-4383.

5. STPP - Surface Transportation Program - Primary Funds

The Federal and State funds available under this program are used to finance specific transportation projects on the state designated Primary Highway System. Of the total received, 86.58% is federal and 13.42% is state funds that come from the state Special Revenue account.

Primary funds are distributed statewide (MCA 60-3-205) to each of five financial districts. Prior to the beginning of each biennium the Montana Transportation Commission designates a level of sufficiency which it considers adequate and another considered critical. The MDT then computes the ratio between the Primary System mileage rated below adequate sufficiency within each financial district and the total Primary System mileage rated below the adequate level statewide. Another ratio is computed of the Primary System mileage rated at-or-below critical in each district to total Primary System mileage rated at-or-below critical statewide. The MDT distributes three-fourths of the total Primary System funds among the five financial districts based on the adequate sufficiency ratio and one-fourth based on the "at or below" critical sufficiency ratio. No financial district can receive more than one-third of the total Primary System funds. In the event that a district would receive more than one-third of the available primary system funds based on the adequate and critical ratios, the funds in excess of one-third are redistributed among the remaining districts. The Transportation Commission (MCA 60-2-110) establishes priorities for the use of primary funds. In urbanized areas, these priorities are established with input and assistance from the local transportation planning process.

Eligible activities include but are not limited to construction, reconstruction, rehabilitation, resurfacing, restoration and operational improvements on the state's designated State Primary Highway System. US 12 - Brooks Street (from the junction of Reserve Street to the junction of Interstate 90 Van Buren Street Interchange) is the only primary highway in the Missoula area eligible for the use of these funds.

6. STPS - Surface Transportation Program - Secondary Funds

The Federal and State funds available under this program are used to finance specific transportation projects on the state designated Secondary Highway System. Of the total received, 86.58% is federal and 13.42% is state funds that come from the state Special Revenue Account.

The Transportation Commission (MCA 60-2-110 (1) and (3)) distributes secondary funds each fiscal year to the five financial districts. Distribution is based on the following:

- 1) 30% in the ratio of land area in each district to the total land area in the state.
- 2) 35% in the ratio of the rural population in each district to the total rural population in the state.
- 3) 30% in the ratio of rural road mileage in each district to the total rural road mileage in the state.
- 4) 5% in the ratio of the value of the rural bridge square footage in each district to the total rural bridge square footage in the state.

MDT, in cooperation with county commissioners from the affected district, will determine priorities within each district.

Eligible activities for the use of secondary funds will fall under three major types of improvements: Reconstruction, Rehabilitation, and Pavement Preservation. The Reconstruction and Rehabilitation categories will be allocated at least 65% of the program funds with the remaining 35% dedicated to Pavement Preservation.

There are two Secondary Highways in the Missoula area which are eligible for the use of these funds, they are: Mullan Road - Secondary 267 and Pattee Canyon Road - Secondary 533.

7. IM - Interstate Maintenance Funds

The Interstate Maintenance (IM) program is designed for projects on the Interstate System involving resurfacing, restoring, and rehabilitation of the existing roadway. The federal share for any eligible IM project is 91.24% and the state is responsible for the remaining 8.76%. The state's percentage is funded through the state Special Revenue Account.

Activities eligible under the Interstate Maintenance program include resurfacing, restoring, and rehabilitation of the roadway. In addition, reconstruction or rehabilitation of bridges, existing interchanges, and over crossings also qualify. Construction of new travel lanes other than high occupancy vehicle (HOV) lanes or new interchanges are not eligible for funding under the IM program. Preventive maintenance activities are eligible when a state can demonstrate, through its pavement management system, that such activities are a cost-effective means of extending interstate pavement life.

The Montana Transportation Commission approves the fund apportionment to the statewide Interstate Maintenance program. The IM funds are distributed throughout the financial districts based solely on need. However, consideration is given to balancing needs against existing and future construction manpower when distributing the funds.

The only highway eligible for use of these funds in the Missoula area is Interstate 90.

8. STPHS - Surface Transportation Program - Hazard Elimination Funds

The purpose of the Federal Hazard Elimination program is to identify hazardous locations throughout the states highway system, assign benefit/cost ratio priorities for the correction of these hazards, and implement a schedule of projects for their improvements. Hazard elimination projects are funded with 90% federal funds and 10% state funds.

Projects eligible for funding under the hazard elimination program include any safety improvement project on any public road; any public surface transportation facility or any publicly owned bicycle or pedestrian pathway or trail; or any traffic calming measure. The projects are selected by the Safety Bureau identifying high hazard sites through the analysis of law enforcement accident reports. Sites with a cluster of accidents over time are field reviewed and an appropriate type of corrective action is determined. The cost of the proposed hazard elimination project is compared to the potential benefit of the action. Once the benefit/cost ratio is calculated for all high hazard sites, the projects are prioritized from highest to lowest and the projects are funded in this order until the yearly funds are exhausted.

9. NHS - National Highway System Funds

The purpose of the National Highway System (NHS) is to provide an interconnected system of principal arterial routes which will serve major population centers, international border crossings, intermodal transportation facilities and other major travel destinations; meet national defense requirements; and serve interstate and interregional travel.

The National Highway System is composed of all interstate routes, a large percentage of urban and rural principal arterials, the defense strategic highway network, and strategic highway connectors. The federal share for any eligible NHS project is 86.58% and the state is responsible for the remaining share of 13.42%. The state share is funded through the state Special Revenue account.

Activities eligible for the National Highway System funding include construction, reconstruction, resurfacing, restoration, and rehabilitation of segments of the NHS. Operational improvements as well as highway safety improvements are also eligible. Other miscellaneous activities that may qualify for NHS funding may include research, planning, carpool projects, bikeways, and pedestrian walkways.

The Montana Transportation Commission approves the fund apportionment to the National Highway System projects. The NHS funds are distributed throughout the financial districts based solely on need. However, consideration is given to balancing needs against existing and future construction manpower when distributing the funds.

Eligible routes in Missoula include Interstate 90, US 12 – Brooks Street (from the west urban limit to the junction of US 93/U8103 – Reserve Street) and US 93 – Reserve Street (from the junction of Brooks Street/U-8103 to Interstate 90 - Reserve Street interchange).

10. STPRP - Rail/Highway Crossing Protective Devices Program

The purpose of the federal Rail/Highway Crossing – Protective Devices program is to identify high hazard rail crossing sites and install new rail crossing signals. MDT's Rail - Highway Safety manager is responsible for surveying, identifying and prioritizing those railroad crossings that require new protective devices or upgrading of existing devices. The funds are distributed on a statewide basis determined by a priority list ranked by a hazard index. The federal/state ratio is 90% federal and 10% state.

11. STPRR - Rail/Highway Crossing Elimination of Hazard Program

The purpose of the federal rail/highway crossing – elimination of hazard program is to identify high hazard rail crossing sites and construct new rail/highway grade crossings. The program also utilizes funds to rehabilitate existing grade separations. Possible expenditures include the separation or protection at grade crossings, reconstruction of existing crossings and relocation of highways to eliminate crossings.

Projects for this program are selected by identifying those sites where only a grade separation will eliminate an identified hazard or where an existing grade separation exists but needs rehabilitation or replacement. Since funding for this program is limited, STPRR funds are often used in combination with other federal funding sources (NHS, STPP) in order to accomplish costly grade separation projects. Grade separation projects are funded with 90% federal funds and 10% state funds.

12. HBRRP - Highway Bridge Replacement and Rehabilitation Program

This program provides funding for the rehabilitation and replacement of deficient bridges. The funding, eligibility requirements and project selection for this program is divided into two categories, depending upon whether the bridge is located “on-system” or “off-system.”

On-System:

The On-System Bridge program receives funding through the federal Highway Bridge Replacement and Rehabilitation Program. The On-System Bridge program receives 65 percent of the HBRRP funds. The

remaining 35 percent are allocated to the Off-System Bridge program. In general, On-System Bridge projects are funded with 80 percent federal funds and 20 percent state funds.

Projects eligible for funding under the On-System Bridge program include all highway bridges on the state system. The bridges are eligible for rehabilitation or replacement. In addition, painting and seismic retrofitting are also eligible under this program.

A structurally deficient bridge is eligible for rehabilitating or replacement; a functionally obsolete bridge is eligible only for rehabilitation; and a bridge rated as sufficient is not eligible for funding under this program.

MDT's Bridge Bureau assigns a priority for replacement or rehabilitation of structurally deficient and functionally obsolete structures based upon sufficiency ratings assigned to each bridge.

Off-System:

The Off-System Bridge program receives funding through the federal Highway Bridge Replacement and Rehabilitation Program. As stated above, the On-System Bridge program receives 65 percent of the HBRRP funds. The remaining 35 percent are allocated to the Off-System Bridge program. Off-System Bridge projects are funded with 80 percent federal funds and 20 percent state funds. Projects eligible for funding under the Off-System Bridge program include all bridges not "on-system," at least 20 feet long in length, and have a sufficiency rating of less than 80.

The procedures for selecting bridges for inclusion into this program is based on a ranking system which weighs various elements of a structures condition and considers county priorities. MDT Bridge Bureau personnel conduct a field inventory of off-system bridges on a two-year cycle. The field inventory provides information used to calculate the Sufficiency Rating (SR).

13. RTF - Reconstruction Trust Funds (State)

The Pavement Preservation Program funds state construction projects and are funded totally with state fuel tax dollars. Projects not eligible for Federal funding/participation are funded with these dollars. The program funds projects on the Primary and Secondary highway systems to preserve the condition and extend the service life of the pavement. The type of work consists entirely of overlays. Eligibility requirements are that the highway be maintained by the state. The Transportation Commission establishes the priorities for the program. This program is totally state funded, requiring no match. MDT staff selects the projects based on pavement preservation needs.

14. FTA - Federal Transit Administration - Section 5307, 5309 & 5310

The Section 5307 program is a general fund appropriation distributed to all urbanized areas based on a formula. The apportionment is based on population and population density. The funds are to provide financial assistance to urban areas for mass transit capital and operating expenses, as well as for transit planning. The federal share is a maximum of 80% for capital and planning, and a maximum of 50% for operating expenses. The local match of 20% for capital and planning and 50% for operating must be in cash from non-federal and non-fare box revenue. This match is provided through the Missoula Urban Transportation District. The intent of the Section 5307 program is to simplify the grant application and review process by reducing the role of the Federal Government while enhancing state and local government responsibilities.

The Section 5309 program is a discretionary program with funds allocated each year for capital expenses only. The federal program funds come from \$.05 per gallon federal gas tax from which transit receives one-fifth of the total revenue. The program is targeted for major mass transportation projects that require additional funding beyond that available through the Section 5307 program. The maximum Federal share on any project is 75% with the remaining 25% met from local funds. In Missoula the local match requirement is met through the Missoula Urban Transit District.

The Section 5310 program authorizes capital grants to eligible organizations to assist in providing transportation for the elderly and/or persons with disabilities. Federal Transit Administration funds 70% of all costs for equipment, with 30% match coming from unrestricted federal funds, state monies or local match.

15. State Fuel Tax Funds - City and County

The State of Montana assesses a tax of \$.27 per gallon on gasoline and diesel fuel used for transportation purposes. Each incorporated city and town within the State receives a portion of the total tax funds allocated to cities and towns by State law based upon:

- 1) The ratio of the population within each city and town to the total population in all cities and towns in the State;
- 2) The ratio of the street mileage within each city and town to the total street mileage in all incorporated cities and towns in the State. The street mileage is exclusive of the Federal-Aid Interstate and Primary Systems.

Each County receives a percentage of the total tax funds allocated to counties by State law based upon:

- 1) The ratio of the rural population of each county to the total rural population in the State, excluding the population of all incorporated cities or towns within the county and State;
- 2) The ratio of the rural road mileage in each county to the total rural road mileage in the State, less the certified mileage of all cities or towns within the county and State; and
- 3) The ratio of the land area in each county to the total land area of the state.

For SFY 2000 the City of Missoula received \$937,547 and the County received \$336,517 in state fuel tax funds.

All fuel tax funds allocated to the city and county governments must be used for the construction, reconstruction, maintenance, and repair of rural roads or city streets and alleys. The funds may also be used for the share that the city or county might otherwise expend for proportionate matching of federal funds allocated for the construction of roads or streets that are part of the primary, secondary or urban system.

Priorities for the use of these funds are established by each jurisdiction receiving them.

12.0 Recommended Improvement Plan

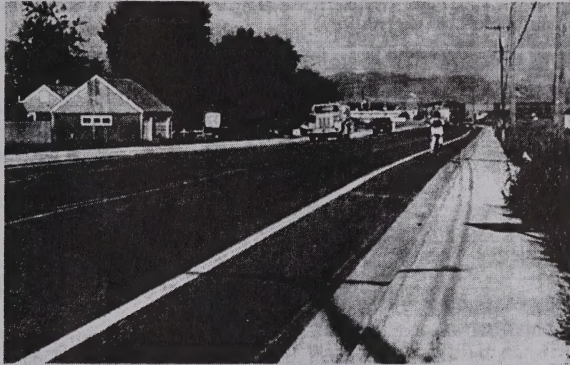


TABLE 12-1
Committed Major Network Improvement Projects

Values expressed in estimated thousands

#	LOCATION	DESCRIPTION	STATUS as of 9/99	NOTES	Total Costs
1	N. Reserve St.	Widen	In progress		
2	Reserve St.	Landscaping & Ped/Bike improvements	Done		
3	Airport	Interchange	Done		
4	Fort Missoula	Trolley Car Restoration	In Progress		\$100
5	Shady Grove Trail	City-CTEP- Burton to Russell	Done		
6	S. 14th St. W./ Johnson St.	Signal	Done		
7	SW Higgins- Russell to High Park	Widen	In progress	Incorporated into phase I of SW Higgins – Spring 2000	\$80
8	Mullan Road	Irrigation Ditch	Done		
9	Mullan Road- Old Milwaukee S Curves	Reconstruct & Realign	Done		
10	Blue Mtn. Rd.	Realign,	In Progress		\$750

#	LOCATION	DESCRIPTION	STATUS as of 9/99	NOTES	Total Costs
		Widen & Pave			
11	US 93-Glacier & Ridgeway Rds	Realign, Elim. Offset & Signalize	Done		
12	Upper Rattlesnake/ E. Missoula Sts.	Paving	Done	County Project E. Missoula section delayed until sewer is built	
13	Boulevard/Park Trees	City-CTEP-Blvd. Tree Replacement	Inactive		
14	E.Front/Madison /Van Buren	City-CTEP-Ped. Improvements	To be done in 2000	Will not be done as CTEP just City funding	\$25
15	W. Broadway Sidewalks	City-CTEP-Front to Russell	Inactive	On- going	\$324
16	City Park	City-CTEP-Sidewalk	Done	Bonner/Rose/Playfair	
17	Miscellaneous Locations	City-CTEP-Curb Ramps/Alley Sidewalks	Inactive	Assimilated into other projects or eliminated	
18	Historic Trail Markers/Display	City-CTEP	Done		
19	Milwaukee RR Right of Way Acquisition	City-CTEP	Done	Acquisition was in previous TIP, Current TIP shows Const. at \$190,000	
20	Trail Develop.	City-CTEP	Fiscal 2000		\$115
21	Broadway Riverfront Acquisition	City-CTEP	Done		
22	Stephens Ave.	City-CTEP-Street Right of Way Trees	Spring 2000	Medians; reconstruct drainage, curbs, incorporated into other projects	\$900 CTEP 402
23	W. Broadway-Airport to Flynn	Widen to 4 Lanes	Done		
TOTAL					\$2,294

TABLE 12-2
CMAQ Improvement Projects*

Values expressed in estimated thousands

#	LOCATION	DESCRIPTION	STATUS as of 9/99	NOTES	Total Costs
	City Street Paving	Done	Done		
	County St. & Alley Paving	Done	Done		
	Purchase St. Sweepers	Done	Done		
	Mtn. Line Bus Acquisition	Done	Done		
	Mtn. Line-Transit Projects	Done	Done		
	Reserve St. Walkway	Done	Done		
	Mountain Line Bus Bike Racks(10)	Done	Done		
	Mountain Line Bus Replacement (8)	Done	Done		
1	Bike/Ped Coord.	Program Supplement	In Progress		\$24/year
2	Areawide	Traffic Signal Project	In Progress		\$4,920 (In Progress)
3	N. Reserve St.	Transit/Bike/Ped Project	Done		
4	Mountain Line	Downtown Circulator Bus & Op. Assistance	Done		

5	Mountain Line	Upgrade: Replace 10 Buses	Done	Y		
6	Mountain Line	Off-Street Transit Facility	In Progress	Y		\$500
7	Areawide	Primary Sidewalk Network	Spring 2000	Y	39 th SW Higgins There will be other phases of sidewalk network	\$3,100
8	Areawide	Bicycle Commuter Network	Phase I Done, Phase II Under Contract	Y	Phase III will complete North Ave to Livingston and Milwaukee ROW to the River	\$622
9	Areawide	Bicycle Lanes	Done	Y	Phase I	
10	North Side	Bike/Ped Access I	In Progress	Y		\$1,200
11	California St.	Bridge	In Progress	Y		\$600
12	Orange St.	Bridge	In Progress	Y		\$4,775
13	Brooks/South/ Russell-Phase I	Traffic Improvement	In progress	Y	ISTEA \$	\$1,700
14	Brooks/South/ Russell-Phase II	Traffic Improvement	In Progress	Y	Total project cost estimates = \$3.5 Million	\$1,250
15	North Side	Ped/Bike Access II	Deleted	N		
16	South Ave.- Reserve to 38th	Walkway/Bikewa y	Summer 1999	Y	County Project	\$262
17	Mountain Line	Park & Ride Lots	Deleted	N		
18	System-wide	Transit Projects	Inactive			\$2,000
	TOTAL					\$21,025

*Projects 1 through 13 will be funded by the current CMAQ allocations. Projects 14 through 18 will be funded by future CMAQ allocations.

TABLE 12-3
Other Major Network Improvement Projects

Values expressed in estimated thousands

#	LOCATION	DESCRIPTION	STATUS as of 9/99	NOTES	Total Costs
1	S. 3rd St.- Reserve to Russell	Reconstruct 3 Lanes	In progress	About to enter into design. Construction will occur approx. 3 years from now.	\$2,500
2	Russell St.- River to <u>5th</u>	Widen to 5 Lanes	In future years	\$100,000 in 1999 Tip for PE #2,3,8, are all one project	\$1,500
3	Russell St. Bridge	5 Lane Bridge Plus Approaches	In future years	\$100,000 in 1999 Tip for PE #2,3,8, are all one project	\$5,000
4	Airport/Mullan Street Grid	Construct N/S & E/W Collector Streets	In future year		\$4,200
5	Misc Bike/Ped Improvements	Project to be Defined Later	Inactive		
6	Mullan Rd.- Reserve to Broadway	Overlay and Pave Shoulders	Done	Not a TIP project	
7	Madison St. River Bridge- South App.	Extend South Along Arthur to 6th	Inactive	5 th /6 th /Arthur reconstruction. Funding unclear	\$590
8	Russell St.-5th to Mount	R/W & Widen to 5 Lanes	In future years	\$100,000 in 1999 Tip for PE #2,3,8, are all one project	\$4,000
9	Mullan Rd.-First mile W. of Reserve	Widen	Done		
10	North Side Greenway	Nonmotorized Trail	Inactive		\$88
11	S. Reserve-3rd to 39th	Improve Ped/Bike Environment	Inactive		\$500
12	Johnson St. Extension	2 Lanes South to Brooks	Inactive	Same project as Mary Street	\$750
13	Broadway-Flynn to Bitterroot RR	Install Lighting	Inactive	There are no plans to do this project	
14	Stephens-Orange to Mount	Install Landscaped Median	In Progress	See project 22, Table 12-1	\$400
15	Higgins-Pattee Canyon-South*	Reconstruct to 3 Lanes	In Progress	Part of 39 th Higgins Project	\$1,420
	Higgins-South to	Bike Lanes &		Bike lanes are done;	

#	LOCATION	DESCRIPTION	STATUS as of 9/99	NOTES	Total Costs
16	Brooks**	Intersection Improvement	In Progress	intersection improvement portion of project is inactive	\$666
17	South Ave.- Reserve to Russell	Reconstruct to 3 Lanes	Inactive	Grant to Clark-money transferred to 39 th /SW Higgins primary sidewalk project	\$600
18	39th St./SW Higgins-93 to Pattee	3 Lanes (except 5 lanes Russell- Highpark)	In Progress	See where listed in CMAQ	\$5,800
19	Mary St. Extension	2 Lanes-Reserve to Mall w/ RR Xing	Inactive	Same as # 12	\$250
20	Rattlesnake Dr.- Lolo to Creek Crossing	Add Paved Shoulders w/ Left Turn Bays at School & Brooks	Inactive		\$500
21	South Hills	Nonmotorized Trail	Inactive		\$161
22	Lolo St.-Duncan to Rattlesnake	Reconstruct 2 Lane	Inactive		\$500
23	Linda Vista bridge	Construct approaches and bridge to connect to Blue Mountain/ Hwy 93	Inactive	\$250,000 in private bridge fund; expect additional funding from RSID	\$3,200 - 5,000
	TOTAL				\$34,425

* Project includes redesign of Higgins/Pattee Canyon intersection

** Project includes redesign of Higgins/Beckwith intersection

TABLE 12-4
Other Major Network Improvements Considered but Not Funded

Values expressed in estimated thousands						
	PB	Rd	#	LOCATION	DESCRIPTION	Total Costs
	X		1	Brooks-Dixon to Buck House Bridge	Lighting	\$334
	X		2	Misc. Street Lighting Projects	To Be Defined	\$2,000
	X		3	Stephens-Orange to Brooks	Lighting	\$242
		X	4	Linda Vista Bridge (east)	2 Lane Bridge	\$2,500
		X	5	Rattlesnake Dr.- Missoula to Lolo	Widen to 3 Lanes	\$500
		X	6	Brooks-Mount to Higgins	Widen w/o Cutting Trees	\$1,800
		X	7	Van Buren-Vine to Missoula Ave.	Reconstruct 2 Lane w/ Median	\$1,500
	X	X	8	Greenough/Duncan-Madison to Lolo	Overlay & Realign w/ Sidewalk on One Side	\$500
	X		9	Creek Crossing	Pedestrian Bridge	\$456
		X	10	Maclay Bridge	New 2 Lane Bridge	\$3,800
	X	X	11	Rattlesnake-Creek Crossing to Tamarack	Pave Shoulders	\$167
	X	X	12	Duncan Dr.-Lolo St. to W. Mtn. View	Overlay, Add Sidewalk & Blvds	\$202
	X	X	13	Orange-Alder to I-90	Widen (Incl. New RR Underpass)	\$5,100
		X	14	Pattee Canyon Road	Install Wrngs, Clear, Widen Shlds	\$193
		X	15	Stephens-South to Pattee Creek	Link Addition	\$500
				TOTAL		\$19,794

TABLE 12-5
Transportation System Management (TSM) Improvement Projects

Actual Values Expressed

#	LOCATION	DESCRIPTION	STATUS as of 9/99	NOTES	Total Costs
1	Mullan Road MP 2.9-3.1	Install Curve Warnings	Inactive		\$2,600
2	Mullan Road MP 2.0-2.2	Install Curve Warnings	Inactive		\$750
3	Mullan Road MP 0.9-1.1	Install Curve Warnings	Inactive		\$860
4	Front & Ryman	Restrict Parking	Inactive	Not feasible at this time	\$550
5	Greenough Hill	Straighten Alignment, Enforce Speed Limit	Inactive	Not feasible	\$4,800
6	Front & Madison	Modify Medians to Enable Bike Xings	Done		
7	Broadway-- Block East of Van Buren St.	Install Lighting to Illuminate Median	Inactive		\$15,400
8	E. Broadway & I-90	Install Curve Warning & Object Markers	Inactive		\$3,900
9	I-90- E. Missoula Interchange	Reconstruct WB On-Ramp	Inactive		\$19,000
10	S. 3rd & Clements	Flatten Shoulder Slope, Improve Visibility	Inactive	Not feasible because of R-O-W	
11	S. 3rd & Tower	Extend Culvert, Enclose Ditch, etc.	Inactive	Not feasible because of R-O-W	
12	Higgins- 4th to Brooks	Restrict Parking	Inactive	Not feasible at this time	\$2,600
13	Mount/Park/ Franklin/ Plymouth	Reconstruct as Y Intersection	In progress	Temporarily installed	\$15,300
14	South Ave. & Johnson	Widen Approaches from N & W	Inactive	Done on South Ave. in 1997	\$23,000
15	Brooks & Harve	Restrict Parking on North Side of Harve	Done		
16	Reserve & 39th	Add Eastbound Left Turn Bay on 39th	Inactive	This will be addressed in 39 th project	\$8,000
17	23rd Avenue	Ped/Bike	Inactive	Waiting for SID to be developed	\$300,000

#	LOCATION	DESCRIPTION	STATUS as of 9/99	NOTES	Total Costs
		Improvements			
18	Hillview Way	Require Sidewalks/ Bike Lanes	Inactive		N/A
19	Madison Street River Bridge- South Approach	Construct Ped/Bike Trail Along Approach	Inactive	Bike system in place	\$25,000
20	Dearborn & Garfield	Improve Sight Distance	Inactive	Additional yellow curb added	\$3,771
21	Fairview & Garfield	Improve Sight Distance	Inactive	Additional yellow curb added	\$4,920
22	Florence & Edith	Install Stops on Edith, Improve Crosswalks if Warranted	Inactive	Warrant not met	\$4,750
23	Garfield & 9th	Install Stops on 9th, Yellow Curbs	Done		\$595
24	Cooley & Dickens	Restrict Parking, Re- Stripe, Larger Stops	Inactive		\$900
25	Garfield & 4th	Install Stop Signs on 4th, Restrict Parking	Inactive	Stop sign not warranted	\$596
26	Fairview & Washburn	Extend Curb, Restrict Parking, Larger Stops	Done		\$1,155
27	Chestnut & 3rd	Larger Stops, Restrict Parking	Done		\$880
28	Front & Pattee	Install Sidewalk Bulbs, Signs & Pavement Markings	Inactive	CBD bulb project submitted	\$8,900
29	Main & Ryman	Install Sidewalk Bulbs, Signs & Pavement Markings	Inactive	CBD bulb project submitted	\$10,900
30	Cottonwood & 3rd	Westbound Left Turn Bay, Ped Xing on 3rd, Move Signs	Inactive	Not feasible at this time	\$4,785
31	Cottonwood & 6th	Move Signs, Add Signs & Pavement Markings	Inactive		\$1,021
32	Mount & Cleveland	Limit Access, Restrict Turns	Inactive	Not feasible	\$1,590
33	Kent & Oxford	Install Islands, Stop Bars, Ped Xings	Inactive	Waiting for Oxford project	\$7,725

#	LOCATION	DESCRIPTION	STATUS as of 9/99	NOTES	Total Costs
34	Myrtle & 4th	Install Curb Bulb & Sidewalk Island	Inactive	Waiting for 4 th St. project (2000)	\$6,670
35	Phillips & Cowper	Larger Stop Signs, Restrict Parking	Done		\$1,200
36	Arthur & Beckwith	Replace Signal Heads, Add Turn Lanes	Done		\$21,990
37	Spruce & McCormick	Move Curb Line, Reconstruct Sidewalks	Inactive		\$7,845
38	Liberty & Riverfront	Nonmotorized Trail	Inactive		\$85,500
	TOTAL				\$592,667

13.0 Air Quality Analysis

13.2 Background

PM_{2.5}

The original EPA airborne particulate standard was Total Suspended Particulate (TSP). In 1987 the TSP standard was replaced by the PM₁₀ standard (particulate matter with an aerodynamic diameter of 10 microns or smaller). The new standard is a more accurate measure of the particulate that could have an adverse impact on human health, since the body's defense system can trap or filter out most particulate larger than 10 microns. There are 24-hour and annual average standards for particulate matter. The PM₁₀ 24-hour standard is 150 $\mu\text{g}/\text{m}^3$ (not to be exceeded more than once a year) and the annual average standard is 50 $\mu\text{g}/\text{m}^3$. Missoula has not exceeded the 24-hour particulate standard since 1989, and has not exceeded the annual standard since 1986.

In 1998 the EPA added a fine particulate standard, PM_{2.5}, because recent health effects studies suggested that premature deaths and increased morbidity were associated with exposure to particle levels well below the PM₁₀ standards. PM_{2.5} is shorthand notation for particulate matter with an aerodynamic diameter of 2.5 microns or smaller. Fine particulate penetrates deeper into the small airways of the lungs than the coarser (2.5-10 microns across) particulate and consequently can have more of an impact on the respiratory system. The 24-hour standard for PM_{2.5} is 65 $\mu\text{g}/\text{m}^3$, not to be exceeded more than 2% of the year, and the three-year annual average is 15 $\mu\text{g}/\text{m}^3$.

In 1999 Missoula began monitoring for PM_{2.5}, the new EPA particulate standard. Based upon the chemical mass balance studies done in Missoula and PM₁₀ data collected over the last three years, Missoula is close to violating the annual average PM_{2.5} standard of 15 $\mu\text{g}/\text{m}^3$. By the year 2003, Missoula will know where it stands relevant to the PM_{2.5} standards. Most PM_{2.5} comes from combustion sources such as vehicles, woodstoves, and industrial boilers.

Redesignation

Through a variety of control strategies, Missoula has made great strides in reducing its air pollution problems. These include stringent woodstove regulations, using deicer instead of sand on the roadways, and requiring oxygenated fuels to reduce CO emissions from cars in the winter months. The City, County, and MDT's District Office have all purchased street sweepers. TDM activities have helped reduce VMT, and therefore, air pollution. Because of these programs, projects, and regulations, Missoula has not violated federal and state air quality standards since 1989 for PM₁₀ and 1991 for CO, making Missoula eligible for redesignation to attainment. The Missoula City-County Health Department is working toward redesignation.

In order to be redesignated, the Health Department must write CO and PM₁₀ maintenance plans showing how Missoula will continue to attain state and federal air quality standards. For CO, air quality modeling for the proposed project at Brooks/South/Russell indicates Missoula will continue to attain the federal standards once the project is completed as long as all current controls stay in place. Once the Montana Department of Environmental Quality completes

controls stay in place. Once the Montana Department of Environmental Quality completes Missoula's 1996 CO emission inventory, the Health Department can evaluate what control measures are needed to ensure compliance well into the next century.

Missoula's latest particulate study (1995-96) shows vehicles are responsible for more and more of the air pollution in the Missoula valley. Missoula's population continues to increase and the vehicle miles traveled are increasing at an even faster rate. The amount of pollution caused by cars and trucks is directly related to how much people drive. The more miles that are driven, the more particulate that is kicked up from the road, emitted from the tail pipes, and released from brake and tire wear. In order to apply for redesignation, the department will have to evaluate how to ensure emissions from vehicles do not overwhelm the gains made in other areas.

Conformity

A conformity determination has been completed to demonstrate that this Update does not adversely affect air quality. The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) have concurred with this determination, which is included in an attachment to this document.

-TECHNICAL MEMORANDUM-

EMISSIONS ANALYSIS & CONFORMITY DETERMINATION MISSOULA, MONTANA

October 27, 1999

Prepared by: Urban Planning Section
Transportation Planning Division
Montana Department of Transportation

Contents: I. Introduction
II. Background
III. Transportation Plan Update Process
IV. Conformity Analysis Process
V. Summary of Findings
VI. Conformity Determination
VII. Consultation

I. Introduction

On November 15, 1990, the Clean Air Act Amendments (CAAA) of 1990 were signed into law. The Act requires substantial reductions in emissions from the transportation sector, meaning that the CAAA has a major impact on the programs of the Federal Highway Administration.

The purpose of the conformity provision of the CAAA is to ensure consistency between the Federal transportation planning process and Federal air quality planning process. The regulations require that for an urban area not in attainment of National Ambient Air Quality Standards, it must conduct a conformity determination to demonstrate that its transportation plan or any revisions to its plan will not adversely affect air quality.

The Urban Planning Section, Montana Department of Transportation, in cooperation with the Missoula Office of Planning and Grants (MOPG) and the Montana Department of Environmental Quality, is preparing an Emissions Analysis for incorporation in the Missoula Transportation Plan Conformity Determination. The following paragraphs provide background information and outline the planning assumptions, methods, and data sources that will be utilized in completing this analysis.

II. Background

Areas within the Missoula Transportation Planning Area have been identified as not being in compliance with the National Ambient Air Quality Standards, established by the CAAA, for carbon monoxide (CO) and particulate matter (PM10) pollutants. As a result these areas have been formally classified as being "non-attainment areas" for these pollutants. The State of Montana has developed the Montana State Implementation Plan (SIP) designed to bring these non-attainment areas into attainment. This plan has been approved by the Region VIII Office of the U.S. Environmental Protection Agency (USEPA).

The SIP analysis for Missoula determined that requiring the use of oxygenated fuels during the winter months, combined with the benefits anticipated from improved vehicle emission control technology, would allow Missoula to meet the carbon monoxide standards. Adoption of ordinances designed to reduce dust emissions from winter traction control programs was determined to be sufficient to achieve the PM10 emissions standards. No traffic control measures were identified as being necessary to meet either the current PM10, or the current carbon monoxide standards. The 1996 Missoula Transportation Plan Update was adopted with the understanding that the USEPA may soon adopt a particulate standard of PM2.5. This new standard may require further analysis and mitigation through the Transportation Plan and TIP.

During the 1996 Missoula Urban Transportation Plan Update process, all regionally significant projects were modeled for air quality conformity. On October 25, 1996, the Missoula Transportation Policy Coordinating Committee made a determination that the Transportation Plan conforms with all current applicable air quality regulations. The Federal Highway and Transit Administrations issued a finding of conformity on the Missoula Transportation Plan dated November 26, 1996. A new conformity determination must be made on the 1999 Plan Update. The FHWA, FTA, and MPO must make a conformity determination on any new or amended plan in accordance with the EPA conformity regulations (40 CFR part 51). This determination will insure that the plan is consistent with the Missoula SIP.

III. Transportation Plan Update Process

Federal regulations require all urban areas in the United States to have a Transportation Plan, and that these plans be updated every five years for attainment areas and every three years for non-attainment areas. The Missoula Urban Area Transportation Plan was last updated in 1996, with a two-year process resulting in more than 200 pages of information.

The purpose of updating the plan every three years is, according to federal statutes, to confirm the transportation plan's "validity and its consistency with current and forecasted land use conditions and trends and to extend the forecast period." Thus, the 1999 Transportation Plan Update is in the form of a technical memorandum to the Montana Department of Transportation (MDT) and is a progress report on the 1996 Plan's goals and recommendations. It does not contain any new projects inside the non-attainment area. All the regionally significant projects contained in the 1999 Update were also included in the conforming 1996 Plan (see attached list of projects, Table D-2 from 1996 Plan). The emissions inventory for Missoula has not been revised since the 1996 Plan and demographic projections for this 1999 Update have been adjusted through 1998 based on actual growth and extended through 2018 based on the same growth assumptions developed in the 1996 Plan. The travel demand model will not be updated for the 1999 Plan. The next full update will be done after the 2000 Census information is available and an updated SIP for Missoula has been completed.

The 1999 Update process began with a series of meetings on roadway systems, non-motorized systems, transportation demand management, socio-economic data, and air quality. The public was invited to attend these meetings, and a mailing was sent to interested parties. Primarily experts and stakeholders in the various topics attended the meetings. The purpose of the meetings was to look at the progress that has been made since 1996 on the goals and recommendations from the 1996 Transportation Plan. Once a draft was completed and reviewed internally, two public open houses were held in July. Attendance was minimal, but good comments were received from the approximately 15 members of the public and interested agencies. A public hearing was held at the Transportation Policy Coordinating Committee's (TPCC) August meeting. One person gave general comments on transportation in Missoula. These events were publicized in local media, and mailings were sent to a list of approximately 150 people and agencies. The Transportation Technical Advisory Committee (TTAC) and TPCC also reviewed the draft at their meetings, which are always publicized in local media and open to the public.

IV. Conformity Analysis Process

Compliance with Federal & State Regulations and Rules

The following analysis process complies with 40 CFR Part 93, Subpart A and ARM Chapter 17.8, subchapter 1304 as required for determining conformity of transportation plans to federal and state implementation plans.

Conformity Area of Analysis

Through consultation with DEQ and EPA it was agreed that carbon monoxide emissions is not of concern for this analysis. CO monitoring in Missoula over the life of the 1996 Plan has shown a continual decline in emissions and the latest population projections have dropped, which should lower CO emissions further. However, the 1996 Plan conformed in 2015 for PM-10 by only a small margin so it was agreed that additional analysis was needed specific to PM-10. Therefore, the area of analysis is the Missoula PM-10 non-attainment area that includes the majority of the developed area in and around the City (see attached Figure D-1 from 1996 Plan).

Analysis Assumptions

Through the 1999 Plan update it was found that population growth in the Missoula Area has slowed in the late 90's. Consequently, the 1996 Plan overestimated this growth. Based on this finding and the minimal change involved in the 1999 Plan update, through consultation with MOPG, DEQ, and EPA, it was determined the extent of analysis for conformity would also be minimal and not include an update of the travel demand or air quality models. The analysis would involve manually adjusting PM10 VMT and emissions based on actual population growth and extending emissions through a 20-year planning horizon to 2018. Total emissions for 2018 must be less than the established emissions budget from the SIP of 16,119 lbs/day.

Based on the decline in population projections, PM10 VMT and emissions were manually recalculated and projected out to the 2018 horizon year. Growth in ADT was also calculated based on the most recent available data and compared to the projected growth from the 1996 Plan to confirm that actual growth has been less than the projected 1996 Plan growth. The methodology and detailed analysis are attached.

V. Summary of Findings

Results from the analysis are included in the following table:

	Horizon Year 2015 (from old 1996 Plan)	Horizon Yr 2018 (adjusted for 1999 update)
Population	114,300	112,100
VMT	997,945	987,129
ADT Growth	1.54%	1.39%
PM10 Emissions	15,538 lbs/day	15,370 lbs/day
CO Emissions*	57,608 lbs/day	57,091 lbs/day

* Through the consultation process it was determined that CO was not a concern as monitoring has shown a continual decline in CO emissions. Therefore, additional analysis was not necessary. But, since Missoula is a CO nonattainment area, CO emissions have been recalculated for the 2018 Build Scenario to document the anticipated future emissions for the 1999 Plan Update

Credit has not been taken in this analysis for potential benefits derived from the various projects and programs that have been implemented in the Missoula area since the 1996 Plan and expected to contribute towards the improvement of Missoula's air quality. Since the 1996 Plan, implementation of various bicycle, pedestrian, transit and sweeper purchase projects; and programs such as TDM have improved air quality in the Missoula area.

VI. Conformity Determination

The conformity criteria for a Transportation Plan during the control strategy phase for PM10 is that the transportation plan must be consistent with the motor vehicle emissions budget. The current Missoula PM10 budget is 16,119 pounds within the nonattainment area. This budget consists of tailpipe emissions of PM10 and paved road emissions from vehicles.

A review of the data in the table under Section V – Summary of Findings, indicates that future year emissions of PM10 will not exceed the established SIP emissions budget. The transportation plan will not interfere with maintenance of the PM10 air quality standards through the year 2018.

For CO, the analysis of the transportation plan is required to demonstrate that emissions of CO from implementing the plan will either be less than emissions from a no-build scenario or less than 1990 emissions. The calculated emissions in 2018 (57,091 pounds per day) are well below the 1990 emissions of 189,481 pounds per day [source: 1996 plan update].

VII. Consultation

The general consultation guidance contained in the State of Montana Air Quality Rules on Conformity (ARM Chapter 17.8 Subchapter 13) is being utilized in preparing the Missoula transportation plan conformity determination.

The determination is being prepared by the MDT Urban Planning Section through a process of cooperation and coordination with the Missoula Office of Planning and Grants, the Missoula City-County Health Department and the Montana Department of Environmental Quality,

In the Spring of 1999 when the update process was initiated, discussions began between the MPO, MDT, DEQ, FHWA and EPA regarding the extent of the plan update and required level of determination for conformity. It was anticipated that the project mix and planning assumptions would not significantly change. In addition, it was uncertain whether the CO emissions inventory being prepared by DEQ for Missoula County for 1993 and 1996 would be completed in time for this determination. Therefore, the agencies thought a determination could possibly be achieved through a consultative process without having to prepare a new regional analysis. In addition, it was understood that a new analysis would be conducted following the completion of the CO Emissions Inventory and the 2000 Census at which time better data will exist to prepare the analysis.

In late summer, through consultation with DEQ and EPA, it was decided emissions could be estimated through the 20-year planning horizon without additional modeling by correlating them to the actual change in population growth. The methodology used was developed in cooperation with MDT, DEQ and EPA.

This memorandum is being circulated to all interested parties to give notice that a conformity determination process is underway and to provide an opportunity to review and comment on the assumptions, procedures and data sources described.

The Missoula Transportation Plan update is scheduled for completion in October 1999. Because of the very short time horizon imposed by this schedule, any party having questions, concerns or comments relating to the information provided here is requested to contact the MDT Urban Planning Section by October 13, 1999.



U.S. Department
of Transportation
**Federal Highway
Administration**

Montana Division
2880 Skyway Drive
Helena, Montana 59602

November 17, 1999

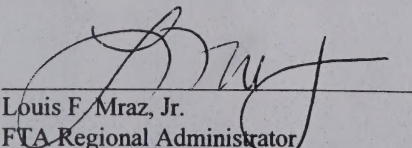
Kelley Segars, Transportation Planner
Missoula Office of Planning & Grants
435 Ryman
Missoula, Montana 59802-4292

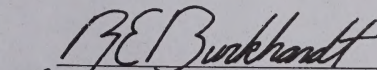
RE: Conformity Determination for the Missoula 1999 Transportation Plan Update

Dear Ms. Segars:

In accordance with the Clean Air Act Amendments of 1990, a conformity finding of the transportation plans and programs in a non-attainment area is required of the U.S. Department of Transportation. Based upon our evaluation of the Metropolitan Planning Organization's (MPO) finding of conformity and related documentation, in coordination with the Environmental Protection Agency (EPA) and the MPO, we have determined that the Missoula, Montana urbanized area has met the requirements of the Transportation Conformity guidance issued November 24, 1993. Demographics and financial forecasting have been updated to a twenty-year horizon from 1999 to 2019. The travel demand model has also been projected for a twenty-year horizon. Missoula's 2002 Plan Update will include 2000 census data and an updated model run. Therefore, a finding of conformity is hereby made with respect to the 1999 Plan Update.

This conformity determination is in effect until such time as a new determination is required either by regulation, major revision of the transportation plan, or a State Implementation Plan (SIP) revision.


Louis F. Mraz, Jr.
FTA Regional Administrator


Janice Weingart Brown
FHWA Division Administrator

Attachments

cc: EPA - Jeff Houk
MDT - Lynn Zanto, Urban Planning Section

File #: 724.100 reb/lr

